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ABSTRACT

The papers in this monograph represent responses to criticisms of teacher education. The theme connecting the papers is reflection and change in teacher education. The following papers are included: (1) "Computers in Education--Another Failed Technology?" (Thomas A. Drazdowski); (2) "Selected Effects of Cooperative Learning" (Therese A. Ream); (3) "Teaching the Reading Process to Elementary Education Majors: Issues to Consider" (Michele L. Irvin); (4) "Field Experiences To Bridge the Gap Between Theory and Practice" (Michele Tellep); (5) "Bicultural Teacher Education: A Native American Perspective" (Doris McGrady); (6) "Whole Brain Learning, Learning Styles and Implications on Teacher Education" (Phillip V. Shortman); (7) "Expert Teachers as Guest Lecturers for Preservice Teachers: An Organizational Proposal" (Robert Clemens); (8) "New Staff Induction Programs: The State of the Art" (Carol Blundell); (9) "Emerging Teachers: The Nurturing Process" (Margaret Foley); and (10) "The Role of the Teacher in Follow-Up Activities for Staff Development Programs" (Joseph Clapper). (JD)

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Introduction

Mary M. Dupuis

This monograph is dedicated to the memory of Edward R. Fagan, our colleague and friend. One of his last professional activities was the evaluation of the papers submitted for this collection. His judgement was clear and precise, but always humane. We will miss him.

Teacher education remains at the center of the ongoing national discussion about the future of education. Teacher education has been attacked in national reports as out of date, ineffective and self-serving. The papers in this monograph represent responses to such broadly-stated attacks, but these responses are focused and thoughtful. The theme which connects these papers is reflection and change. Each of the authors is or has been a practicing teacher as well as a teacher educator. Thus, they write from within the profession. While they are part of the enterprise, they analyze it carefully from their specific perspective and identify both areas of concern and recommendations for change.

Topics of these papers range from areas within teacher education, such as computers in education (Drazdowski), cooperative learning (Ream), reading instruction (Irvin), and field experiences (Tellep), to issues related to a specific ethnic group--Native American Indians (McGrady and Shortman), to work with practicing teachers within teacher education programs (Clemens, Blundell, Foley and Clapper). Thus the papers are widely representative of the topics under discussion inside and outside of teacher education. We offer these papers as part of the continuing discussion, in the expectation that they will contribute positively to the future direction of teacher education.

Computers in Education--Another Failed Technology?

Thomas A. Drazdowski

Despite the billions of dollars that have been spent on educational technology over the past 40 years, why have most of these technologies failed to deliver on their educational promises to American classrooms? With such technologies available, why do most teachers today still primarily rely on the textbook and the chalkboard to deliver their day-to-day instruction? What role will one of the more recent technologies, computers, play in education--change agent or failed technology? These are questions I will address during the course of this paper.

History of Educational Technology

The history of instructional technology in education is an interesting one. According to Gayeski (1989), every decade has seen the introduction of at least one new technology which was predicted to radically reform instruction. In the 50's it was film. In the 60's it was broadcast educational television, programmed instruction, and audiovisual aids like filmstrips, slides, and overhead transparencies. The 70's brought videocassettes, remote-access audio and video, and the beginning of computer-assisted instruction. The 80's have introduced videotext, interactive video, teleconferencing, electronic mail, and the promise of artificially intelligent teaching systems. What effect have these technologies had on education? In the view of many, educational technology has had little, if any, significant impact on education as originally envisioned (VanWyck, 1976; Spitzer, 1987; Gallegos, 1987; Gayeski, 1989; Reigeluth, 1989).

As an example, let's review educational television, which is often cited as one of instructional technology's most notable failures (Berkman, 1976; Gordon, 1976; Shorenstein, 1978). During the late 1950's and early 1960's, according to Wagschal (1984), most U.S. schools purchased television sets, intending to use them to improve the quality of education. But it never happened. He offers three possible explanations: the schools that had purchased television sets rarely had the foresight to set money aside for equipment repair and maintenance; the schools never found an effective way to train teachers to integrate T.V. into their ongoing instructional programs; a majority of the teachers had a snobbish attitude regarding the quality of commercial television and it consequent usefulness in the classroom.

Reasons for Failures of Educational Technology

Just why do educational technologies fail? Spitzer (1987) believes that three of the main factors are: conflicting values, lack of leadership, and short-sightedness. First, he feels that in order to succeed, educational technology, which is a branch of engineering, must be centered upon functional values, which hold that "if it works, then it's good engineering," (p. 18). What he sees as a problem is functional excellence being contaminated by non-functional considerations, such as commercial values (making a profit), aesthetic values (pretty but ineffective learning programs), and scientific values (rigorous university researchers who are unable or refuse to provide practical guidance to our educational engineers). He feels strong and consistent leadership is essential. Even though many individual development efforts are going on, there is little coordination or sharing, the national educational picture is becoming increasingly complex and decentralized, and there is no adequately powerful source of leadership on the horizon. Finally, he states that the history of educational technology has been clearly short-sighted; it has developed through tactical efforts, meaning one sees a problem and one solves it, instead of through strategic efforts, meaning one understands the commonalities and root cause of a great many related problems before rushing to a solution.

Gayeski's (1989) analysis of why educational technologies fail is varied. Her reasons include technophobia (fear of technology), inhibition of human contact (there seems to be no substitute for direct human contact), disruption of the legal or economic status quo (people resist the social aspects of change), lack of appropriate designs and information (technology often being led by vendors rather than designers and researchers), unreliability of technology (equipment and software doesn't always work as expected), new media being replaced by something even newer, lack of local production ability (producing one's own programs often next to impossible), and lack of standardization and uniformity by manufacturers.

Komoski (1987) asserts that technologies fail because schools never create an environment in which a broadly-based "systemic" understanding of technology is being used to help teachers relate technology to the curriculum. He feels that schools need to deal systemically with all aspects of the curriculum in order to create well integrated systems designed to meet the needs of the students and be improved on the basis of feedback from those students. Schools must move beyond the one-innovation-after-another approach to educational technology and focus on a sense of systemic relationship to the whole teaching-learning process.

Educational Computing

This brings us to the issue of computer use in education. Society has moved into the "information age," and many feel computer use in schools is essential for student to meet the challenges of the 21st century. By one estimate, 75 percent of all jobs in 1985 involved computers in some way (Naisbitt, 1982). People who don't know how to use computers will continue to be at a disadvantage. Alfred Bork (1979), a pioneer in computer-based learning, put it this way:

> We are at the onset of a major revolution in education, a revolution unparalleled since the invention of the printing press. The computer will be the instrument of this revolution. . . .By the year 2000 the major way of learning at all levels, and in almost all subject areas, will be through the interactive use of computers (p. 29).

The research firm Talmis reports that during the 1986-87 school year the installed base of microcomputers in schools grew to 2.03 million units, an increase of 25 percent from the previous year, and to buy that hardware schools spent $415 million. They also found that K-12 schools spent $170 million for personal computer software during the 1986-87 school year, and were expected to spend $200 million during 1987-88 (Goodspeed, 1988). And computers can now be found in just about any school. A study conducted during the 1986-87 school year by Market Data Retrieval Inc. found that microcomputers were used in 95.6 percent of all public schools, 91.4 percent of all Catholic schools, and 67.3 percent of all private schools (Goodspeed, 1987).

As to the influence of the computer in education, researchers like Bork (1984) tend to find that what is found in practice is often "disquieting." Although the number of computers in school systems is increasing, most schools are not using computers to capacity (Bellando and Winer, 1985; Dickey and Kherlopian, 1987). This may be for a variety of reasons. Midkiff (1983) found that teachers may have psychological, mathematical, mechanical, and professional fears concerning the computer and their own abilities. Other teachers have concerns about programming skills, time limitations, software, suitability, and proper usage (Ellis, 1986). Knupfer (1987) found that equity of student access to instructional computing was closely related to teachers' computer usage.

Research also shows that computer anxiety is a major factor in whether computer technology is implemented. Jay (1981), Howard and Smith (1986), and Hill, Smith, and Mann (1986) found that computer anxiety is a factor in regard to the adoption of computer technology. Bloom (1985) lists a number of fears about computers that early users may have: breaking the machine, looking stupid, encountering indecipherable error messages, working with a "power other," inadequate documentation, losing control, lack of time to learn the operation, disappointment, and a sense of futility.

Teachers' attitudes toward computers also affect their usage in schools. Attitudes affect the way people attend to ideas or events. People pay more attention to what they enjoy, and tend to ignore what they dislike (Fleming & Levie, 1978). Lillard (1985), in her study of 219 teachers in the Warren County, Pennsylvania School District found that the correlation between attitude and the instructional use of microcomputers was statistically significant. Clements (1985) found that the biggest obstacle to initiation of computer art in schools was teacher attitudes. Although he found that the socioeconomic status of schools and student-computer ratio have a significant impact on the successful implementation of a computer curriculum, McGee (1986) also found that teacher attitudes relate to successful implementation.

Another problem hindering the influence of computers in education is the perception by many that this new technology is just another passing educational fad (Wagschal, 1984; Slavin, 1989; Bracey, 1989). Maddux (1986) states "there is every indication that the infamous pendulum syndrome, in which educational innovations seem doomed to follow a cycle of unrealistically optimistic expectations followed by disappointment, disillusionment, and abandonment, is beginning to afflict educational computing" (p. 27).

Educational software is often viewed as a problem as well. Many agree that there has been extensive development of software (Kelman, 1984; Cohen, 1985; Pollack and Breault, 1985), but others have found that the quality of this software is questionable. Komoski (1984) reported that there ware only 200 high-quality programs among the 10,000 available products his associates surveyed. Bergheim and Chin (1984) found that nearly half of all the software for sale during 1983-84 was drill and practice, which does have a proper educational use, but is considered poor software because it takes advantage of only the most elementary computer capabilities.

Others, however, think that the quality of software is slowly changing for the better (Whiting, 1985). Lockard, Abrams, and Many (1987) state that software writers will not only produce high-quality software in the areas that are now important, but that they will also search for additional areas of microcomputer applications where there is presently little if any software available, and that software will take better advantage of the capabilities of the microcomputer as part of the educational process and better assist the teacher in the educational setting. Hannafin and Peck (1988) see a bright future for software, as well. Besides advancements in hardware technology that will make all computers more powerful, faster, smaller, and less expensive, they see software being positively influenced by three trends in software development: "the prominence of multiuser, multitasking operating systems; the increasing sophistication and flexibility of computer-assisted instruction authoring software; and the advent of instructional design software" (p. 353).

Future for Computers

What, then, is the future for computers in education? Lockhard, Abrams, and Many (1987) suggest three future for educational computing. In one scenario, microcomputers will go the way of earlier technological innovations and use will decline due to unclear academic benefits, funding problems, frustration resulting in backlash against the whole concept, and lack of trained teachers.

Scenario two has computer use stabilizing and remaining much as it currently is, due mostly to limited equipment, lack of goals or a model curriculum for computers in education, and again, limited teacher training, for most preservice teachers are still receiving limited exposure to computers, which is unlikely to produce the leaders needed to spark the further development of computers in schools.

The last scenario has computers making an advance, the ultimate of which is total infusion of computers throughout the curriculum. This will have taken place due to improved software, the need for new tools to access the vast stores of knowledge that will be before us, and demands by parents, employers, and other outside forces that improvements be made in computer education.

Bork (1984) sketches two scenarios--one negative, one positive--for the future of computers in education. In the "dismal future," he sees schools simply continuing business as usual. Most courses will continue to be centered on books and lectures, teacher training programs will continue to ignore the new technology, and the capabilities of the computer will never be realized. In a "bright future," powerful leaders in politics and business agree that the U.S. system of education must be reformed if the nation is to maintain its world position, and that one major outcome of this reform will be the large-scale development of curricular materials that make the computer an integral part of learning from first grade through college.

Mehlinger (1988) predicts that technology will not survive in education if teachers must spend more time preparing for lessons than they do now, if they have less time to devote to students, and if technology trivializes the purposes of schooling. He feels that technology also has "the potential to rejuvenate the profession by forcing educators to explore new ways to structure and organize their work" (p. 46).

Wedman (1984) summarized the future of computers in education this way:

> Contrary to popular belief, the future is not something that just happens; it is created. Just as teachers write lesson plans which unfold later in the classroom, educators can also write descriptions of possible futures or scenarios which will unfold later in the school. . .The future of computers in education can be the product of groups of teachers, administrators, and educational technologists systematically planning for (and eventually creating) the future. The challenge is to stop asking, "What does the future hold for computers in education?" and to start asking, "What type of future do we want to create for education involving computers (p. 148).

What can be done if computers are to realize their full potential in eduction? Many suggest that the best way to deal with this new technology is the development of curricular materials that make the computer an integral part of learning (Bork, 1984; Telford, 1989; Caisy, 1989). Bork (1984) states that the development of such a curriculum lies at the heart of any effort to use computers to improve U.S. schools, but that such a development will not take place overnight. He sees it taking a decade-long national commitment during which 1% of the total investment in U.S. education will be spent on curriculum development.

Wagschal (1984) also suggests that we should be learning how to incorporate computers into classroom activities in ways that suit our goals for ourselves and our students. He feels the best way to accomplish this is to place the machines in the hands of the individual teachers, for they are the only ones who can sensibly and realistically determine how best to use this technology to help their students learn. Talley (1989) agrees that what's often missing in computer education is learning how computers tie in with what we already know and are already doing. The important thing isn't the computers, but the instruction, and if we keep this in mind when working with faculty and student teachers, then involvement and change may come more easily.

Gubser (1985) speculates that there is little incentive for the average classroom teacher, who is overburdened, underpaid, and probably tenured, to learn about and apply new instructional technologies. Since teachers are basically paid the same no matter what they do or how many students they teach, he suggests that incentives be based on productivity, as it is in the private sector, while making technological resources more abundant. With such incentives we might expect to find instructional technology adopted much more readily and rapidly.

Mehlinger (1988) thinks that teacher education courses should offer laboratory courses that focus solely on technology that will enable students to enhance their effectiveness as teachers. He feels if future teachers are familiar with technical aids as well as the material and goals of their content areas, they are more likely to create better instructional deliveries and develop into professionals whose careers can be constantly enhanced by future innovations. Watt (1984) agrees that teacher training is critical. He feels the limited computer expertise among teachers will unfortunately keep the vision of computers as educational tools from becoming a reality.

Tetenbaum and Mulkeen (1986) feel that as long as computers are looked upon as the answer to educator's problems rather than one of the many tools available to practitioners, the real issue of reestablishing a core mission and a consensus in education will not be tackled. They state that is necessary to understand both our educational goals and the capabilities of the machine we are calling upon to help us fulfill those goals if we are ever going to understand the role of the computer in education. They suggest that although the computer is a superb tool to enhance learning to a degree earlier media could not, it is still only a tool, but one that can serve as a catalyst at a time when society is changing. They conclude that computers "provide an occasion to explore educational issues, to release new energies, to rethink what we can do, to reconceptualize schools, and to create a basis for change" (p. 112).

I believe that we are at a critical juncture in the implementation of computer technology in education and its subsequent impact on the quality of education in the U.S. The heart of the matter lies with winning the grassroots support of the people in the educational trenches, the regular classroom teachers. Where should we start in the winning of this support? As the King of Hearts said to the White Rabbit, "Begin at the beginning, and go till you come to the end; then stop" (Carroll, 1954, p. 134). We must begin by thoroughly training our preservice teachers in the use of computers and their educational applications. We can instill a positive attitude toward technology by example early in their program, and by so doing, we will develop teachers who will not fear future innovations but use them to maximize their students' learning. Colleges of Education must take the lead in this training. State Departments of Education can provide an impetus for change by making a technology requirement part of the initial certification process.

Inservice teachers need training, as well. With teacher and community support, districts and school boards must adopt progressive new goals for education involving computers, and then provide the resources necessary to attain those goals successfully. Innovative technology "experts" already exist in many districts, and their talents must be fostered and used.

Finally, adequate leadership and vision will be needed at all levels to create the future we want for education. If this future does not include the incorporation of computers into all aspects of daily classroom life, computers face the same fate as earlier educational technologies. They will end up collecting dust in teachers' closets, and a potentially valuable teaching/learning tool will never realize its full potential.

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Selected Effects of Cooperative Learning

Therese A. Ream

In recent years an increasing amount of the educational community's attention has been focused on an approach or, more accurately, a loosely-knit variety of strategies for the delivery of instruction collectively titled "cooperative learning." Earlier this year an entire issue of Educational Leadership was devoted to it (Brandt, 1989/1990). According to Slavin, "Cooperative learning refers to a set of instructional methods in which students are encouraged or required to work together on academic tasks" (1987a, p. 31). A significant aspect of cooperative learning is the interaction which occurs among pupils. Another essential feature is the task or goal toward which the interaction is directed.

The cooperative learning process successfully implemented has the potential of yielding positive outcomes. Some outcomes are direct results of cooperative learning while others are indirectly associated with the skills necessary for cooperative learning to take place. This paper will highlight selected indirect and direct positive outcomes resulting from the successful implementation of cooperative learning.

Present State of Knowledge

Interpersonal Skills

One indirect positive outcome is the development of students' interpersonal skills. The students need to know how to communicate with their team members during the process of cooperative learning. These social skills include such behaviors as getting to know and trust team/group members, communicating accurately and unambiguously, providing mutual challenge and support, engaging in effective conflict resolution (Johnson, 1986; Johnson and Johnson, 1987). According to Johnson, Johnson, Johnson-Holubec, and Roy (1984), the development of social skills is basic to the successful implementation of cooperative learning. Johnson and Johnson (1989/1990) stressed that cooperative learning groups would not be productive unless interpersonal skills were employed. Yeamans (1989) carried this issue one step further and stated that collaborative skills can assist in "promoting conditions that integrate high productivity and high morale" (p. 30). The development of high morale can enhance learning so that the process of learning becomes a pleasant experience and not one which the students try to avoid.

The students must be made aware of the skills, helped to understand the skills, practice the skills, and receive feedback concerning the use of the skills (Smith, 1987). Nattiv, Render, Lemire, and Render (1989) strongly supported the notion that interpersonal skills are integral to the development of the holistic individual. They caution people not to exclude these skills on the basis that they are not focused on academics. The authors argued that such interpersonal skills fall within the realm of the affective domain and therefore, are already included in the scope and sequence of a democratic school system. The school system which encourages cooperative learning is enabling the students to benefit from peer interaction. The social skills help to sustain cooperative interaction with peers (Hertz-Lazarowitz, Sharan, and Steinberg, 1980), and also assist the students in acquiring a sense of social responsibility (Vermette, 1988). Hopefully, the interpersonal skills necessary for cooperative learning to occur within the classroom will generalize to the individual student's functioning outside the classroom and the school, positively affecting the whole range of that person's relationships with other people.

Common Goal-Setting

Another positive outcome which indirectly results from the implementation of cooperative learning is the development of common goal-setting abilities. Slavin (1988) stated that in order for cooperative groups to function well they must work toward a common goal. The collaboration necessary to work together for the common goal will produce more than an individual working alone; "The whole of their combined efforts is greater than the sum of its parts" (Slavin, 1988, p. 22). This idea of a cooperative endeavor can be traced back to Allport (1954/1979) who researched the nature of discrimination based solely on differences of skin color or ethnic origin. As he stated in his book The Nature of Prejudice, "It is the cooperative striving for the goal that engenders solidarity" (p. 276). The necessity of collaboratively working together to achieve a common academic goal is an absolute prerequisite for cooperative learning. As in the case of the social skills effect, one can only hope that this ability to agree upon a common goal and to commit oneself to work toward its attainment will generalize to the cooperative learning student's life outside the classroom.

Cross-Racial Relationships

The first direct effect of cooperative learning presented in this paper is the improvement of cross-racial relationships. On a note related to the common goal setting effect, Pate (1988) found that people of different ethnic backgrounds working together on a task, problem, or goal develop positive feelings toward one another. Cook (1978) and Slavin (1979) stated that the students involved in interracial groups who experienced the cooperative learning process chose more friends from outside their own racial background. In 1981 Hansell and Slavin discovered that students with various achievement levels involved in cross-racial groups and experiencing cooperative learning also increased the number of friends outside of their own racial community. Slavin (1985) stated that "a cooperative-learning experience often offers students their first (or best) cross-racial friendships" (p. 58). The relationships which develop because of the cooperative learning experience are positive (Slavin and Madden, 1979) and therefore can lend support to the cohesiveness of the classroom environment. Johnson and Johnson

(1985) stated that cooperative learning experienced by cross-racial groups promoted more cross-ethnic relationships than did the groups involved in competition. The entire issue of cooperation versus competition can be evaluated in a new light when the outcome of the cooperative learning stresses the benefit of cross-racial friendships.

Student Achievement

Cooperative learning has been shown to directly impact student achievement. A meta-analysis was done comparing the effects between cooperation and competition. Johnson, Maruyama, Johnson, Nelson, and Skon (1981) found that "cooperation is superior to competition in promoting achievement and productivity" (p. 56). When students are permitted to work together and are not placed in situations in which they are competing against one another, they can benefit greatly from such a non-threatening learning environment. This atmosphere is one of acceptance and mutual concern. The students realize that they are all part of the learning process and that competitive stress is not necessary. Elementary school children need to experience stress-free situations so that, when they enter the work force, they can train their peers to be cooperative rather than competitive. As Brandt has indicated, "Americans have always prized individuality, and we will continue to, but in the modern world we also need team work" (1987, p. 3).

Another facet of this same issue concerns individualism. People need to learn that working cooperatively together can increase achievement and that it does not have to be every person for him or her self. Sherman and Thomas (1986) did some research on cooperative versus individualistic goal-structures. They found that the cooperative group obtained significantly higher achievement scores on the posttest than did the individualistic group. Students who worked together could learn the material better than the students who were responsible for learning the material individually. The students involved in cooperative learning experienced significantly better retention of the information introduced during the time of cooperative learning. The one strong factor present which fostered the retention of the information was that of structured oral discussions (Yager, Johnson, and Johnson, 1985).

Yueh and Alessi (1988) found a different factor necessary for student achievement. They discovered the need for both group and individual rewards to insure student achievement. The authors stressed that this should not be a difficult task for teachers because grades in themselves are the primary rewards sought by students. This finding emphasizes the fact that people like to be recognized for their achievements, a fact which can serve to help foster self-esteem.

Self-Esteem

The issue of self-esteem is monumental in our contemporary society. Many students live in home situations in which their self-worth is degraded and in some instances even violated. The educational system has a responsibility to help children discover their own uniqueness and accept themselves as precious gifts to creation. Every individual has a significant contribution which he or she can make to our society. The challenge is helping young people to realize their potential. Much of the research done on cooperative learning suggests that enhanced self-esteem is one of its direct positive outcomes (Blaney, Stephan, Rosenfield, Aronson, and Sikes, 1977; Cooper, Johnson, Johnson, and Wilderson, 1980; Slavin, 1983). For example, the study reported by Cooper et al. (1980) indicated that more students in the cooperative condition perceived themselves as giving help to others than did students in the competitive and individualistic conditions. Persons of low or shaky self-esteem are unlikely to see themselves as able to offer anything of any value to someone else.

Positive Attitude Toward School

When students begin experiencing success and self-esteem is enhanced, the students then feel that they have a reason for attending school. The school becomes an inviting place where students want to be. Slavin (1980) has stated that students who were involved in cooperative learning rather than in the traditional mode of learning had a greater liking for school. Pupils involved in cooperative learning ventures liked school more than those who were not given cooperative learning experiences (Slavin, Sharan, Kagan, Hertz-Lazarowitz, Webb, and Schmuck, 1985).

Change in Classroom Dynamics

Students who like school can become vital components in the learning process. These active learners are teamed with the teachers and their efforts are solidified through their common goal to learn. The teacher is no longer the one with all the knowledge and the students are no longer mere recipients of that "wisdom." The students are coproducers of ideas along with the teacher (Davidson and O'Leary, 1990). This shift in thinking illustrates how vitally important it is to share the role of teacher. A more humanistically-oriented understanding of the role of a teacher is that of a person who facilitates the learning of others (see, for example, Rogers, 1961, 1980, 1983). Students working cooperatively together are, indeed, facilitating the process of their learning.

Increased Time On-Task

In a recent article entitled "Our Class Has Twenty-five Teachers," the authors stressed the fact that, in their classroom, the students monitor one another and keep others on task; therefore, the pupils become teachers (Behounek, Rosenbaum, Brown, and Burcalow, 1988). Since the students work together to help one another, they spend more time on-task. Studies done by Johnson and Johnson (1981) and by Salend and Sonnenschein (1989) indicated that students who work in cooperative learning groups spent less time off-task than the students who were taught individualistically. Students who are part of a cooperative team will keep on-task so that they contribute to the success of the group. When pupils are working in cooperative learning groups, they stay on-task and they also assist the other members of the group in understanding problems and procedures (Rosenbaum, Behounek, Brown, and Burcalow, 1989).

Development of Higher Order Thinking Skills

Pupils who assist teammates in understanding material must first have the material well organized. Students who organize the materials in a logical and coherent fashion must be using higher order thinking skills. As Slavin has stated, "When students have to organize their thoughts to explain ideas to teammates, they must engage in cognitive elaboration that greatly enhances their own understanding" (1987b, p. 9). Since the students thus develop higher order thinking skills, this is another positive outcome of cooperative learning (Joyce, Showers, and Rolheiser-Bennett, 1987; Slavin, 1987b).

Needed Research Directions For The Future

The positive outcomes cited in this paper give testimony to the benefits reaped through the use of cooperative learning. The benefits, however, should be evaluated thoroughly. Studies must be continuously done in this field to reevaluate the conclusions already stated, as well as to broaden the knowledge base. What follows is a list of possible directions which this much-needed research might profitably follow.

Suggestion #1:

As suggested in the introduction to this paper, the title "cooperative learning" refers to a loosely-knit variety of learning strategies which are usually clustered together. These strategies include Student Teams-Achievement Division, Teams-Games-Tournaments, Team Assisted Individualization, Jigsaw, Jigsaw II, the "Learning Together" model, and "Group-Investigation." These different strategies need to be evaluated in relationship to one another. In almost all the studies reported to date, cooperative learning is compared to other forms of learning, but the different styles of cooperative learning have not been differentially evaluated in comparison to one another.

Suggestion #2:

In reporting the effects of cooperative learning, a hope was expressed that a number of positive qualities prerequisite to, exhibited in, or derived from the cooperative learning experience would generalize to the "real" world outside the boundaries of the school building. Specifically, researchable questions need to be raised and addressed, such as: "Do the interpersonal social skills necessary for cooperative learning in the classroom transfer to the student's network of interpersonal relationships outside the classroom?" "How well are the cross-racial relationships which form as a result of cooperative learning experiences in the classroom able to be maintained outside the classroom?" "How well do the enhanced self-esteem effects and the apparent development of higher order thinking skills transfer to the whole of the student's life, or are these effects merely situation-specific?" In short, this suggestion concerns the **generalizability** of cooperative learning's positive effects.

Suggestion #3:

Cooperative learning implementation changes the traditional dynamics of the classroom; both students and teachers must assume roles to which they are typically unaccustomed. Research must be done to investigate the implications of cooperative learning implementation on teacher preparation. In a related vein, how would an entire school district engage in an effective staff development program to prepare its educational personnel for cooperative learning?

Suggestion #4:

Studies on cooperative learning published to date seem to lack any major international focus. A few studies have been done outside the United States, but even these countries such as Israel and the United Kingdom share a common Western heritage with the United States. In these days of much stronger emphasis on multicultural awareness in education, research in the field of cooperative learning must be channeled in that direction.

Suggestion #5:

The application of cooperative learning strategies to date has been limited to relatively few academic content areas (i.e., social studies, mathematics, science, and some language arts). The use of cooperative learning needs to be expanded to all subject areas in both academic and vocational educational settings. Contemporary cooperative learning occurs mostly in elementary and secondary schools; it is seldom encountered in post-secondary education. Thus, the use of cooperative learning also needs to be expanded into the college/university and technical/trade school settings as well. These extensions would permit the design of any number of comparative efficacy studies.

Suggestion #6:

Given the number of positive outcomes currently attributed to cooperative learning, a researchable question arises as to the reason(s) why it is not more popular and more commonly encountered. What are the sources of apparent resistance to the adoption of cooperative learning? Perhaps a qualitative study should be designed to assess the attitudes of teachers and administrators toward cooperative learning.

Conclusion

This review of selected studies documenting both indirect and direct effects of cooperative learning strategies indicates that its implementation can augment the potential for learning of students involved with it. The learning likely to take place is not restricted merely to academic skills, but students' interpersonal skills can be enhanced through exposure to cooperative learning. As Hilke contends, "Students learn cooperative and communication skills that can transfer to other academic and social situations as well as to life in general" (1990, p. 29). If the goal of contemporary education is the formation of the whole person as a knowledgeable and competently functioning member of society, it seems reasonable to want to pursue those learning strategies which increase the probability of such a product. There is much to recommend that cooperative approaches to learning hold great promise toward the realization of this goal. This paper's suggestions for future research provide a starting point for broadening the knowledge base on cooperative learning, a necessary development if this promising set of pedagogical methodologies is to be grounded in a sound empirical foundation.

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Teaching the Reading Process to Elementary Education Majors: Issues to Consider

Michele L. Irvin

Reading is a life-long activity. There is no way to avoid it and life is made easier when the process of reading can be used to make sense out of printed material. Adults need to be able to use this process in order to be successful.

Many children enter school knowing how to read due to their parents' concern in developing this skill and due to the stimulating environment in which they are raised. Others enter school with the potential to learn how to read and develop the ability to do so while in school. However, some children do not develop the ability to read as well as teachers expect them to and some do not develop this ability at all. It is because of these last two groups that educators from the public schools and higher education are making changes in what they have been doing. These changes are being made in order to meet the needs of a growing number of children who do not learn to read well enough to be successful in school, and eventually, in society.

This paper discusses the issues and concerns that teacher education programs need to address in order to develop teachers who will meet the needs of a growing number of children who cannot read.

The Problem

A significant number of student are graduating from the nation's high schools lacking the ability to read well enough to fill out a job application or survive in today's work force. Burrill (1987) states that many high school students while in school are not able to read the textbooks used in courses required for graduation. Adding this to the fact that in many school districts formal instruction in reading ends after the 6th grade, one starts to get a feel for the enormity of the problem.

In 1985, the Educational Testing Service published the results of a longitudinal study entitled The Reading Report Card. This Study "...presents trends in reading for schoolchildren aged 9, 13, and 17 over four national assessments from 1971 to 1984" (Carroll, 1987, p. 424). The report suggests 5 levels of reading skills ranging from rudimentary (very simple 1st grade stories) to advanced (college level reading material). Analysis of this report indicates that only 39.2% of the 17-year-olds in the study reached the second highest level (McLean and Goldstein, 1988). This level, which is labeled adept, is considered to be approximately at a 12th grade level of literacy. The Reading Report Card shows an overall improvement in students' abilities to read; however, this improvement is a small increase. When less than half of the 17-year-olds are reading at a 12th grade level, a small increase appears dismal.

While blame for this problem has been placed on just about every aspect of education--the school system, teachers, and the students themselves, recent studies have placed the blame on teacher education programs. There seems to be growing evidence that these programs are not doing an adequate job in preparing teachers to teach students to read. This seems like a ridiculous claim when these programs have turned out the very teachers that laid the foundations for all of us to become readers and to use this process to further our own learning. Knowing this to be true, how can reports suggest that teacher education is not doing a sufficient job when it comes to educating future teachers in the instruction of the reading process?

One source of the problem may lie in the instruction in reading methodology offered to elementary education majors. Many teacher education programs offer elementary education majors a basic introduction to reading which typically includes one course in the teaching of reading and one course in the teaching of language arts (Becoming a Nation of Readers, 1985).

Typically, two courses are provided to prepare future teachers in the area of reading. It is no wonder that teacher education programs are being questioned. With teachers having such a limited knowledge base, it is difficult to expect any improvement in the teaching of reading (Becoming a Nation of Readers, 1985).

Teachers' subject matter knowledge is an area that has recently been reexamined. Two groups hold opposing views on the topic. One group believes that subject matter knowledge should be the priority of teacher education programs. Shefelbine and Hollingsworth (1987) conducted a study that looked at preservice teachers' ability to make instructional decisions during a 12 week reading practicum. Of the 14 preservice teachers only four exhibited the ability to make thoughtful decisions about instruction. The variables used to determine thoughtfulness were: appropriate diagnosis, flexible planning, lesson balance, appropriate text placement, type of reading practice, word recognition instruction, and developing background knowledge. The participants in the study had completed two reading courses and were completing a reading practicum at the time of the study. The conclusion of the authors is that more subject matter knowledge, in this case in reading, is needed if preservice teachers are to make thoughtful decisions.

Shulman (1987) and others believe that effective instruction in any subject area requires the teacher to have a solid knowledge base from which to draw. Shulman believes that subject matter knowledge is more important than other kinds of knowledge, such as methodology (Shulman, 1986, 1987; Grossman, et al., 1989). He feels that content knowledge is sufficient for effective instruction.

The other group believes that subject matter knowledge combined with knowledge about teaching and learning should be the emphasis of teacher education programs. Barnes (1989) believes that subject matter knowledge is important for effective instruction; however, she says that subject matter knowledge alone will not enable teachers to make sound judgements about learners, learning, subject matter,

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and teaching. She believes that subject matter knowledge is equally as important as other foundational knowledge for effective instruction in any subject area.

Another source of the problem may be found in the instruction in reading methods courses. Reading, as defined by Frank May (1990), is an interactive process. This process occurs between the author and the reader, between decoding and context, and between words and schema. Rumelhart (1977) also views reading as a process of simultaneously using information from various knowledge sources to arrive at meaning. The reader uses his background knowledge and information from the printed material to gain understanding. He believes that information contained in higher stages of processing influences the analysis of information which occurs at lower stages of processing. The interactive process suggests that information is processed from the top-down as well as from the bottom-up (Jones, 1982). "This means, for example, that decisions about words are made not only bottom-up by processing lower-level information about letter features, letters, etc, but also top-down using the semantic and syntactic context of the word" (Jones, 1982, p. 774). This view of reading differs from the information processing models which are more linear in nature. They view reading in a one directional format which does not permit higher stages to interact or influence processing at lower stages (Samuels & Kamil, 1984). This bottom-up perspective of reading (La Berge and Samuels, 1974) suggests that information from printed material is processed sequentially from letters, to words, to phrases, etc., until meaning is reached. The teaching of skills and subskills is very important in this view of teaching reading. Although both views are currently in use, recent research in reading strongly supports the interactive view.

Hunsberger (1988) suggests that the courses in reading offered to teacher education majors are not providing future teachers with a proper perspective of reading and how students learn to read. She reports that reading is often presented as a series of skills and concepts "...leaving the impression that reading is a matter of techniques to be mastered" (p. 211). This can be labeled as a traditional, behavioristic (May, 1990), or linear view of teaching reading. That is, skills need to be mastered before understanding, or comprehension will occur. According to Kelly and Farnan (1990), a discrepancy exists between what teacher educators want preservice teachers to know and how they teach them. Preservice teachers should be "...treated as learners who are encouraged to engage actively in learning rather than as containers to be filled" (p. 264). These beliefs reflect the interactive process. As knowledge on how children learn to read becomes clearer, it is apparent that the interactive approach best reflects this knowledge. It makes sense then to teach preservice teachers in the interactive process.

By reflecting on the information presented thus far, we see one obvious reason for the use of the traditional approach in the teaching of reading--and that is time. The process of reading is complex, requiring time to teach. It also requires time to learn how to teach it. If one course in reading and one course in language arts is what is typically offered to preservice education majors, teacher educators only have time to skim the surface of the reading process with their students, resulting in only being able to teach skills and concepts. Therefore, these reading courses take on a "...traditional approach where an instructor transmits or prescribes reading techniques by modeling examples teacher can easily memorize and tack on to their existing stores of reading knowledge" (Hollingsworth, 1989, p. 698).

The third source of this problem can be found in the field experiences that are provided to elementary education majors in the area of reading. According to Blanton and Moorman (1985), the field experiences offered to elementary education majors in the area of reading instruction "...are a source of professional shame" (p. 56). They cite the lack of empirical evidence on the effectiveness of teacher preparation and the lack of research to support the value of field experiences in reading as contributors to this problem.

The research that has been conducted regarding field experiences is conflicting. Zeichner (1980) reports that field experiences produce both positive and negative consequences for preservice teachers. Malone (1984) reports that field experiences in teacher education programs produce positive results for preservice teachers. "However, the results show that in many cases field experiences are more productive in general education programs than methods courses such as elementary and secondary reading methods in developing relevant attitudes in preservices teachers" (p. 44).

It is sometimes hypothesized that the positive or negative consequences resulting from field experiences are in direct relationship to the effectiveness of the cooperating teacher. Hodges (1982) studied five seniors during a field experience in reading in which no cooperating teacher was present at any time during the experience. The results indicate that the preservice teachers acted in ways that were in great contrast to views they held immediately after completing a reading methods course and this change cannot be related to the influence of a cooperating teacher. The results also indicate that the preservice teachers feared "being unsure of how to teach" (p. 29). The preservice teachers cited a number of factors that contributed to these feelings, one being the content of their methods course. The preservice teachers felt that their reading methods course offered "...too much too soon and not enough soon enough" (p. 28).

Michelsen et al. (1984) state that application of information taught in methods classes occurs gradually and in stages. This may indicate why a brief field experience is not an adequate situation to apply the information learned in one or more courses and may also explain some of the concerns expressed by the preservice teachers in Hodges (1982) study. According to Duffy (1982), preservice teachers are placed in classrooms where they can observe and work with experienced teachers. However, what occurs in many situations is that the veteran teachers are so busy handling the managerial aspects of teaching that the preservice teachers often do not observe these teachers teaching reading. Therefore, their perceptions of teaching reading are clouded or confused.

Some Solutions

Three sources that influence the preparation of preservice teachers in the area of reading instruction have been cited:

a. the amount of preparation offered to elementary education majors in the area of reading,

b. the instruction in those courses,

c. the field experiences offered in the area of reading.

First in the area of preparation, elementary preservice teachers should take one course as an introduction to the process of reading and one course in the psychology of reading. The reading process should then be integrated in all professional methods courses so that the preservice students are provided with the opportunity of combining with reading many of the content areas they will be required to teach. Hodges (1982) has some sound suggestions for the teaching of reading to preservice teachers: "instruction in the teaching of reading should be a continual process. It should begin with a preservice course which offers some basic instruction interspersed with real or videotaped observations of classroom teaching exemplifying the instruction discussed in class" (p. 29).

This suggestion does not come without problems because changes in the elementary education curriculum would be needed so that integration of reading and content could take place. Changes in the structure of content methods courses would need to occur. In order to give both areas (content and reading) proper attention, team teaching is needed. Therefore, knowledgeable instructors from both areas would present information and help students make connections between the content area and reading methods.

Further, changes in the length of class time would need to take place if both content and reading methods are to be taught in the same class. A regular college class meets approximately 2 1/2 hours per week. If the curriculum were changed to include reading methods in every content class, more time would be needed in order to give both areas adequate treatment.

Second, instruction in these courses should emphasize reading as a process rather than a set of skills to be mastered. The preservice teachers and teacher educators should collaborate to create individual variations and adaptions beyond the examples and models provided (Hollingsworth, 1989). Kelly and Farnan (1990) have developed a model for teaching reading methods to preservice teachers. The Strategic Overlay Model (SOM) allows teacher educators to overlay content with process and permits "teacher educators to enhance the traditional lecture format by teaching content and process as a whole, thus creating and modeling an instructional framework that more closely approximates what they want preservice teachers eventually to use in their own classrooms" (p. 265). This model helps to develop preservice teachers' schemata for the teaching of reading, providing them with a knowledge base which will in turn facilitate future knowledge. The model also allows preservice teachers to be actively involved in their own learning by incorporating cooperative experiences.

Third, the courses that elementary education majors take should have a field experience component built in. The research conducted by Berliner (1984) and Joyce and Clift (1984) suggests that teacher education programs are more successful when they provide preservice elementary teachers with real practice in different subject areas such as tutoring or small group instruction. In addition to this, Blanton and Moorman (1985) indicate that field experiences in the area of reading will not meet their full potential until teacher education programs provide preservice teachers with the opportunity to study, analyze, and discuss their experiences with experienced supervisors.

Society is changing and children's needs are changing. Based on these changes, higher education (specifically reading methods instruction in teacher education programs) needs to change what it has been doing in order to meet society's demands and children's needs. By doing this, teacher education programs will be preparing preservice elementary education teachers to recognize better the various needs of all readers, with the goal of increased achievement for all groups.

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Field Experiences to Bridge the Gap Between Theory and Practice

Michele Tellep

"The belief that all genuine education comes about through experience does not mean all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other. For some experiences are miseducative. Any experience is miseducative that has the effect of arresting or distorting the growth of further experience." (Dewey, 1973, p. 25)

Historically, the concept of field experience in teacher education resulted in literature that notes both positive and negative effects of such experiences along with characteristics of field experience programs and their needs.

One essential element in professional education is practice teaching. Conant (1963) recommends most emphatically that all elementary and secondary teachers should engage in "practice teaching" (p. 142). This idea is supported by Tanruther (1968), in that until professional preparation was made a part of the college or professional school curriculum, the apprenticeship was the primary means of preparing for a profession. He promotes the idea that the more real the field experience is, the greater the value of this experience.

Field experiences and activities should not be regarded or treated as separate and disconnected activities. Teacher education programs should provide a variety of experiences with attention directed towards how these experiences are used to guide the growth of preservice teachers (Merrill & Schuchman, 1973). Through observation, participation, and teaching, these experiences provide guidance in the process of learning to teach.

Over the past decade there have been many attempts to design a worthwhile sequence of practicum experiences. Most programs feature a phased introduction to full classroom responsibility. Immediate total immersion into full classroom responsibility overwhelms most student teachers (Mackey, 1977). Consideration of the stages of the practicum are emphasized by Turney (1982). He recommends that each period of the practicum experience should be planned as part of an order and sequential program culminating in the student experiencing the full range of duties and tasks allotted to beginning teachers.

Theory into Practice

If field experience programs are to help bridge the gap between theory and practice in teacher education programs, they need to be well defined and in an organized sequence. Each step of the field experience should build towards the subsequent experience. It is through this building process that the beginning teacher learns and establishes a repertoire of experience on which to build professional growth.

The importance of this building process is often emphasized in learning theory or methods classes that the preservice teacher takes on campus. These classes emphasize the importance of building on prior knowledge, working from concrete towards the abstract, and using experiences to make the transition from understanding the concept to the actual application of it. Just as we supply the theories for the preservice teacher in the on-campus classroom, so should we encourage their application within the teacher education program. It would not be recommended to have students write a formal essay, if we have not introduced them to the process of building on ideas from sentences, to paragraphs, to complete compositions. It would also appear to place the preservice teacher at a disadvantage were they required to teach immediately without having been guided through the building process of observation, participation and practice teaching.

It is important for the preservice teacher to see the significance of building concepts and establishing knowledge bases relating to experience. They are encouraged to follow these methods when they are developing lessons for students in a classroom. What better way to emphasize this than to have teacher education programs exemplify this building process through an organized sequence of field experiences? Of major importance is that each step is defined with clear purposes so that the preservice teacher can view the sequence of the field experiences as a building process. In such a way the field experiences provide opportunity for teaching practice and also the opportunity for learning and professional growth.

Stages of Field Experience

Each field experience should provide opportunity for observation, participation, and teaching. The amount of time and involvement for each of these components will vary with each stage of the field experiences. Suggestions for implementation of these components into stages follows:

Stage 1

The first field experience would most likely occur during the second year of the teacher education program. In this phase of the teacher education program learning theory and practice classes are introduced. The preservice teacher at this time becomes acquainted with the theory behind the relationship that exists between what the teacher does in a classroom and the resultant student response.

In order to link these theories to actual classroom activities, a field experience needs to be incorporated into the program. At this initial stage, the preservice teacher spends a great deal of the time in the classroom observing teaching strategies compared to student behavior and responses. In actual school settings the preservice teacher can begin to relate the theories being learned to the ways they can be implemented in the classroom.

Participatory activities in this field experience may start the preservice teacher working individually with students, taking attendance or homeroom duties, and working with small groups. Reflection techniques should also be included during this participation component. It is during this reflection that preservice teachers can compare the background theory learned in class to what is actually happening in the lessons they are observing. This comparison and reflection help to build an awareness of what is involved in the teaching/learning process.

Along with this awareness may come some career concerns for students in the teacher education program. Having observed classroom settings and participated in some classroom activities, preservice teachers may opt not to continue with subsequent stages in the program. If preservice teachers are not able to make the comparisons or reflections on the theory and practices used, continuation in the teacher education program may not be recommended. This stage in field experiences may serve the purpose of confirming career choices for the prospective teacher.

Stage 2

Often referred to as a pre-student teaching field experience, this stage incorporates more of the teaching strategies into the program. Equal time is devoted to observation, participation, and teaching. The purpose of this stage is to allow for observation of teaching strategies, participation in daily classroom duties, and the opportunity to develop plans for and practice of teaching strategies. Each component at this stage is equally necessary in order to build self confidence and direction in preservice teachers.

Preservice teachers at this stage need to continually observe new teaching strategies and their relationship to student behaviors and responses. It is through these observations that preservice teachers build ideas, new techniques, and better awareness of the relationship between teacher and student.

Participation in daily routines enables preservice teachers to become established as a regular identity within the classroom and helps to build the confidence necessary for those lessons that they will teach. Reflection should remain a vital part of this participation component relating to the observations in the classroom and the practice teaching experiences preservice teachers are now required to do.

The teaching component of this stage also needs to be a gradual building process. Small group instruction leading to lessons involving the entire class appear to be less overwhelming and more productive for the growth of preservice teachers. Planning for lessons and being responsible for their implementation once again require bridging the gap between theory and practice. Preservice teachers will need to rely on previous field experiences, observations, and participation to incorporate this building process in lessons they are teaching. If a foundation has not been developed to enable preservice teachers to plan a lesson and implement it in the classroom, continuation in the teacher education program would be difficult.

Stage 3

This final field experience is generally known as the student teaching practicum. The major emphasis is on having preservice teachers assume the role of the teacher in the classroom with responsibility for the development, implementation, and evaluation of units of study. Although this is the final goal of this field experience, the observation and participation components are also important aspects of this field experience. The observation and participation activities initially are used to acquaint preservice teachers with the classroom, students, and school situation. Eventually, these components take on a different form as preservice teachers incorporate these into their role as teacher. Preservice teachers observe this role in the school setting as a whole and participate in school-based activities as well as classroom activities.

This stage of field experience generally is for a more extended period of time. During this time, preservice teachers have the opportunity to assume the full teaching schedule of the cooperating teacher and build an established role in the classroom and school. With continuation of the reflection process, preservice teachers are able to witness the maturation of their growth as a teacher based on increased responsibility in the classroom and school. This final stage serves the purpose of enabling preservice teachers to enter the full teaching responsibility that a permanent teaching position entails. With the continual building process of field experiences, preservice teachers appear better prepared to enter into the teaching profession.

Research Implications

These field experience programs, along with being systematic, also need to be continually evaluated and changed. There is a paucity of empirical research that evaluates solely the field experience segment of teacher education programs. The research usually evaluates the entire program of teacher education. The benefits or lack of sufficient field experience is often overshadowed by the remainder of the teacher education program.

It is suggested that each stage of the field experience be evaluated to determine if the experience actually was a benefit to preservice teachers. Is the experience providing the opportunity for preservice teachers to reach the goals or purposes for that particular stage? Does each stage provide ample opportunity for growth and serve as a building block for each subsequent stage?

The "weeding-out" process also needs to be investigated. How many students enrolled in the first field experience actually finish all stages successfully? Follow-up inquiries can investigate the characteristics of those students who eventually finish the program and compare them to those characteristics of the students who do not complete all stages in the program. Opportunity to build on these characteristics can thus be implemented into the field experience programs.

It is important that field experiences be introduced in developmental stages to insure the transition from theory into practice. In addition to containing these stages, programs need to be evaluated and adapted to meet the changes in education. These evaluations of programs can add to the base of empirical evidence and serve as a basis for other programs. This type of research is needed to encourage the ongoing evaluation of programs to determine their effectiveness in bridging the gap between theory and practice.

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Bicultural Teacher Education: A Native American Perspective

Doris McGrady

> It is my personal belief that it is the business of schools to enable all people to make political and economic choices. This obligation is not limited to students but includes teachers, communities and, indeed, entire nations. We need then, as Native American educators, to approach that business with the wisdom of our traditional elders, the compassion of our traditional grandmothers, the courage of our traditional warriors, and the confidence of our traditional children.

Introduction

> The need to convince others that one particular view of life is more correct than another or that a particular way of living is better than another seems to be inevitable in the arena of human events. One has only to review any period of human history to see that struggles to persuade others in these matters is not a recent phenomenon. Some of the most vivid examples of these struggles to be seen in recent history can be found in the schooling of Native American youth. (Foreman, 1987. p 1)

Those struggles have taken on a circular nature in that the movement has been from "changing into whites" to encouraging development of strong Indian identity. While this trend can be seen as encouraging, progress is very slow. Many see time as a luxury we cannot afford if we are to preserve our tribal identities.

Historical Background

> Only by being true to the full growth of all the individuals who make it up, can society by any chance be true to itself.
>
> John Dewey

Missions established throughout many regions of America during the sixteenth and seventeenth centuries were intended to serve many purposes. Among them were economic and political goals and, of course, the more commonly stated religious goals. Underlying the obvious "saving" of souls was the hidden curriculum inherent in religious conversion, establishing a built-in means of control. Regardless of how goals were stated or what priority guided their occurrence, the overarching goal of all missions was to shape local Indian populations to a different set of values and to develop a new lifestyle for them.

In the latter part of the same period, seventeenth century colonial schools were reflections of a society dominated by Puritan religious beliefs and subsequent lifestyle. And, once again, local Indian populations fell subject to efforts intended to change them to the expectations of transplant Americans whose aim was to "civilize" them by any and all means possible.

One means which was designed to accomplish this goal was the boarding school approach which separated Indian children from their families and tribes. The initial founder of this method was Reverend John Sargeant but it took Richard Henry Pratt to develop the system to its fullest destructive potential. Added to it was the "outing" system in which Indian students were boarded with white families during summer vacations. Both plans reflected the same goal, the best way to cause Indian children to lose their sense of heritage and change their value system was to remove them from the source, the family.

The years following saw a slight change in that western missionaries began to establish elementary schools on the reservations. Areas were divided up among churches (with Catholics getting the major portion) and, again, Christianity and education were understandably seen as synonymous by Indian parents. As the BIA became involved with education via the Snyder Act of 1921, new goals came to the fore. The first, termination, was second only to genocide in terms of decimating native cultures and tribes. Termination is still viewed by many as the ultimate goal of the federal government for Indian tribes. The second attempt to deal with "the Indian problem" by the government was assimilation. This became THE GOAL in education, and is, like termination, seen by the dominant society as an ideal solution. Needless to say, it is not seen as ideal by Native Americans and resistance remains strong. Danielle Hornet (1989) says of universities, "...institutions must understand that Indian students, for the most part do not want to become a part of the Anglo mainstream. That means they do not want to relinquish their Indian identity in order to be successful" (p. 12). In 1950 Albert Kneale wrote, after fifty years of service in Indian education, "Every tribe with which I have associated is imbued with the idea that it is superior to all other peoples. Its members are thoroughly convinced of their superiority not alone over members of all other tribes but over the whites as well...I have never known an Indian who would consent to being changed into a white man even were he convinced that such a change would readily be accomplished."

The last educational movement in Indian education (but first to allow any hope) is a result of the 1976 Indian Self-Determination and Education Assistance Act which gives Indian people, finally, control over their own schools and assistance in higher education. Even in light of the fact that less than 50% of our half million students attend reservation or near-reservation schools, Indian controlled schools are the most promising potential source of cultural survival for Indian tribes. As tribes face increasing complex decisions regarding how that potential will be realized, current educational practices are placed under a growing barrage of criticism. One of several avenues through which inadequacies can be addressed is that of bicultural teacher education.

Legitimize Diversity

> "If the dream of equal educational opportunity for Native Americans is to be realized, then education must be studied as a cultural process and this process must be made compatible with the Indian way of life. The Indian student dances to a different drummer. He/she hears Indian drums, not white man's drums."
>
> Dale Little Soldier (1981)

Personal experience as well as substantial research (Swisher, 1989; Osborne, 1983; O'Brien, 1990; Gilliland, 1988) verify that to be most effective, Indian education should ideally be tribally specific. For two obvious reasons the ideal is beyond reach: 50% of our students are attending urban mixed-population schools with students of many tribes and cultures, and the over three hundred tribes and bands make it impractical to consider training teachers in all tribally specific customs. Such training is beyond reality even for those few dedicated people who devote lifetimes to Indian education. Regarding this issue, Danielle Hornett (1989) says, "In the case of American Indian students, faculty must be educated to realize there are certain basic differences in the general makeup of Indian students. It doesn't really matter if it is due to tribal/Indian characteristics or life/personal experiences; that these differences do exist is the important concept" (p. 13).

Barriers to Successful Education

> "There are historical, legal, and moral imperatives for breaking down school barriers that limit children's access to knowledge. The traditional political value of education in the United States argues for extending schooling benefits to all children and youth. Protecting educational opportunities for all citizens means that school access must be equitable." (Keating, Oakes, 1988).

Even the most idealistic of educators would have a difficult time convincing themselves that the breaking down of school barriers or equitable education will be attained in the near future. Perhaps what is needed is a re-examination of some of those barriers so that what has been viewed as obstacles can be measured for the strength afforded to those on the "wrong" side.

One of the problems pervasive in Indian education is demographic in nature and reflects the very small actual number of students. The figure currently stands at 450,000 Indian students, 3,000 of whom attend off-reservation boarding schools. That figure represents only 0.8% of the country's total public school enrollment; blacks account for 16.1%, Hispanics 8.0%, and Asians for 1.9%. (Charleston, 1989). Little wonder that Indians are numbered among "others." This faceless classification carries with it serious political danger for Indian people. While that particular discussion is beyond the scope of this paper, being an "other" does have a major ramification related to education; it makes Indian children anonymous which in turn makes them invisible. Eileen O'Brien (1990) quotes from several interviews on the issue of numbers: Dr. K. Swisher, "We are constantly urging people not to forget us," JoJo Hunt, "...not sure the increase (referring to the upcoming 1990 census) will have an effect on getting national attention focused on our issues...we're still such a small minority," Dr. C. Kidwell, "I doubt that (such an increase) would focus that much more attention on Indians. The change between the 1970 census and the 1980 census was quite dramatic and no one paid attention then." The result has been the little attention and lack of commitment to Native American teacher education demonstrated by the large majority of teacher training institutions.

A second demographic condition that plays a role in Indian education is the population distribution. While the data varies from one researcher to another, it is generally agreed that between 30% to 40% of our students are attending schools on or near reservations, with a majority being elementary students. The geographic isolation of most reservations is one of the dominant negative factors in the field of Indian education as far as many teachers are concerned. Another is the sudden and total immersion into another culture. In both cases the adjustment for off-reservation teachers is extremely difficult. It is one that too many fail to make as evidenced by the 1988 BIA report on education that found an annual turnover rate of 33% among principals and 20% among all professionals (O'Brien, 1990). Either geographic or cultural isolation can be, and indeed often is, devastating to the human spirit. Coupled together, as they are for many reservation teachers, the high turnover rate is easily understood. The irony is in the lack of understanding extended to Indian youth who have been forced into that same intolerable situation.

A discussion of demographic barriers to learning for Indian students needs to include at least brief mention of economic factors involved. Keating and Oakes (1988) point out that for more than a decade, children have constituted America's poorest age group. About one quarter of the children in our country younger than eighteen are poor, and the number is increasing. O'Brien's 1990 paper offers little hope for the coming decade. She uses a 1986 Department of Interior study to place male unemployment on reservations at 58% with that rate going as high as 80-85% on some reservations. Statistics for urban Indians are more difficult to compile but it is generally agreed that male unemployment there averages in excess of 60%. Viewed from an education standpoint, these statistics have to be considered on three levels: A) the individual poverty of each child, B) the collective poverty of the community, and C) the relative poverty of the school. Those who will consider becoming involved with Indian education need to be aware of the statistics. What does not appear in the reports, however, is the number of Indian people who do not consider themselves poor. This attitude is common especially among reservation people. Accumulation and, more importantly, keeping material goods and wealth has never been a goal for Native Americans. To the contrary, it is seen by many as unacceptable to the point of resulting in social ostracism.

A great deal has been said in the past decade about learning styles as they relate to Indian youth. Among the best known studies is that of Chuck Ross (1982) who introduced the right-brain propensities of Indian students. The need to use creativity, the need to see the whole picture as opposed to seemingly unrelated pieces, and discovery learning are three of several implications that teachers of Indian students are expected to glean from Ross's research. Certainly few would argue that there is more reliable or valid research available than Ross's and much teacher training as well as curriculum development have been based on his work. Swisher and Deyhle cite from several studies (Werner and Begishe, 1968; Longstreet, 1978; Brewer, 1977; Appleton, 1983) to submit that Indian children prefer to learn privately, that competence precedes performance, that imitating without verbal direction is encouraged. They cite further from Kleinfeld (1973), Cazden and John (1971), John-Steiner and Osterreich (1975), and Philips (1972) to substantiate the visual strength of Indian children as well as their accuracy in memory of visual information. They conclude by saying, "...the body of research which examined learning styles of American Indian students, although small, does present some converging evidence that suggests common patterns or methods in the way these students come to know or understand the world. ...what is clear from the research...is that American Indian students come to learn about the world in ways that are different from mainstream students" (pp. 4-5).

We need an approach to education that "takes seriously the lived culture of children and their families" (Glenn, 1989, p. 779). Nelson (1982) and Cheek (1984) both offer research to build strong cases for culturally based curriculum. Swisher and Deyhle (1989) say of learning styles, "When viewed as cultural strengths and not weaknesses or deficiencies, the natural skills and abilities of Indian children contribute to providing a total picture of a child's learning style" (p. 4). Gilliland and Reyhner (1988) have developed extensive and very specific techniques for teachers of Native American students. Their work details practical classroom strategies. They outline succinctly, as follows, differences between learning styles:

Suburban/Caucasian Learning Styles	Native American Learning Styles
Well defined, organized	Informal atmosphere
Auditory learner, prefers verbal instructions, explanations	Visual learner, prefers demonstrations, illustrations
Listens to explanations then learns trial and error. Wants teacher as consultant	Observes carefully then tries when he feels secure in doing so. Wants teacher as model
Prefers direct instruction. Likes to try new things	Prefers to be shown. Likes learning through stories, pictures, activities
Starts with parts, specific facts, and builds toward the whole	Starts with general principles, holistic, overall view
Insists on reason, logic, facts, causes	Accepts intuition, coincidence, feelings, emotion, hunches
Competes for recognition	Cooperates and assists
Task oriented	Socially oriented
Impersonal, formal, structured	Personal, informal, spontaneous
Likes discovery approach	Likes guided approach
Relies on language for thinking and remembering	Relies on images for thinking and remembering
Likes talking and writing	Likes drawing, manipulation

In the face of this and similar research Education Secretary Lauro Cavazos is quoted as saying, "We do not know what types of educational practices work best among these groups" (O'Brien, 1990). One can only conclude that, unlike graduate students, Secretary Cavazos has not had the time or motivation to read the literature. Such uninformed or insensitive leadership at the national level does not bode well for Indian education.

Many factors commonly seen as barriers to education need to be reexamined. Osborne (1989) supports the case for re-examination well when he says, "It is unreasonable to expect Zuni people to let down the barriers which have protected them for over four hundred years from foreign intrusion. They need to protect their unique way of life. Their success in this venture depends in part on their ability to be competent in two cultures" (p. 15).

Research

> Teacher education is a social enterprise and has the dynamic qualities of social events. Each incident of social interaction is embedded in a social context that is broader than the boundaries of an observer's vision, reaching back into the history that led up to it...At the same time, each incident of social interaction is constantly in the process of changing, of becoming something else. This future is never precisely foreseeable. To study such a dynamic event requires methods that can describe both their background...and the shifting, changing event as it evolves. (Tabachnick, 1988).

Tabachnick compares and combines the strengths and weaknesses of pure qualitative and quantitative research methods in understanding teaching, learning and schooling. He adds a third element, past and future dynamics of social events, to derive a research model he calls naturalistic. Tabachnick's model is of particular relevance to researchers of Indian education and teachers of Indian students because it takes into account the history as well as the future implications of social events and, additionally, allows for the process of change inherent in social interaction, for the unpredictability of becoming something else. He makes it very clear that we cannot generalize from one country, one minority, or even one group to another.

Studies must be done in the context and with the populations we hope to understand and for which we expect to plan schooling and teacher training.

A substantial number of researchers rely on ethnographic methods. Ethnographers Zeuli and Floden (1987) caution against confusing cultural awareness as described by ethnographic studies with automatic implications for making classrooms culturally congruent. The focus of ethnographic research, however, is different from the naturalistic method in that it appears to overlook social change dynamics and leans considerably toward an anthropological approach. It is interesting to note that Zeuli and Floden attempt to build a case against using ethnography to support culturally congruent classrooms since that stand is in direct opposition to a large number of ethnographers, among whom are Osborne, Butterfield, Au, Kleinfield, Dumont, Erickson, and Mohatt.

Christine E. Sleeter is a researcher who is perhaps more qualitative/quantitative in style and whose findings are of major importance in the field of multicultural education. In 1989 Sleeter published a case study done in Wisconsin wherein she surveyed 416 teachers who had completed teacher education programs that included attention to multicultural issues. Her concern was what those teachers actually did in classrooms relative to multicultural education. Her conclusions were predictable. Minority and lower-class students received more information about non-white people, were presented with more multiracial curriculum, engaged in more discussion about racism and prejudice, and received more instruction in improving social relationships than did white, middle- to upper-class students. "The problem with this," says Sleeter, "is that it leaves children of the dominant social group relatively uninformed about other groups or the struggles other groups face in America today. Future American citizens are not being very well prepared to improve race relations, for example, if racial minority children are the main ones being taught in school about racism" (p. 200).

While more local in scope, the conclusions drawn from Sleeter's 1989 study differed little from those of an earlier study done with Carl Grant (1987). Reference is made to the concern that many White teachers may not view multicultural education as a vehicle for social change. Indian history and Indian culture may be taught, but with no reference to current oppression. In Wisconsin, for example, Native Americans are struggling openly, and sometimes violently, with Whites for recognition of the legitimacy of treaty rights. The omission of this issue from the classroom leaves future non-Indian voters uninformed about a serious issue involving racism and federal justice. Grant and Sleeter also discuss the unwillingness of teachers to address social stratification issues. They state, "The desire not to have to assimilate culturally has been only part of the concern (of minorities); the desire to have power and economic resources equal to Whites has also been a concern. Emphasizing culture at the expense of social stratification may suggest to those Whites who prefer not to confront racism that maintaining and valuing cultural differences is the main goal of multicultural education" (pp. 432-433).

Teacher Education - Strategies for Success

> If the process of education is made gentle and easy and if the students are taught to think for themselves, we may call the man a good teacher.
> Confucius

If one were to describe the ideal teacher for Native American students it is easy to imagine that many would initially specify Native American as one of the characteristics. On closer examination, however, it should be understood that having all Indian teachers is far from ideal and is, in reality, far from possible. If we are to develop the optimum learning opportunities for any student, we need teachers of every ethnic background who are willing to engage in teacher/student sharing in order to best prepare students for the bicultural existence they have to live. Danielle Hornett (1989) says it isn't necessary for the faculty to be Indian. All that is required is that they be student oriented, caring individuals who are open to innovative ideas and willing to risk stepping out of the comfort zone. Osborne (1989) also found that it does not necessarily follow that membership of an ethnic minority group automatically produces adherence to bicultural goals. Finally, we have to keep in mind that statistical reality of 0.6 percent which is the number of Indian teachers available, many of whom are working in Oklahoma or with the Navajo Nation. There are too few and it remains doubtful that a substantial increase is in the near future.

In order to alleviate the critically small number of Indian teachers we need to look to the teacher training institutions. Strong efforts are being made through several programs across the country such as Indiana University (Mahan, 1990), Whitworth College (Liebert, 1988), Arizona State, University of Wisconsin, Montana State, and Penn State (pending), all of whom have multiple programs to recruit and assist Native Americans in teaching, and/or non-Indian teachers of Native Americans. These and other programs are making an impact in spite of bureaucratic foot-dragging, indifferent administrations, insufficient funding, and other seemingly insurmountable obstacles. Although progress is slow and sometimes misguided, less of the latter is seen as the number of Indian administrators and planners increases, along with the number of capable Indian people on university faculties and in positions of national leadership.

The growth of the community college movement over the past two decades has resulted in the establishment of twenty-four tribal colleges around Indian country. A few plans are being developed from various four-year institutions to tap that source for teacher recruitment. Tribal colleges are doing better retaining students than the four-year colleges, according to O'Brien's (1990) recent article in Black Issues in Higher Education. However, whether or not those students will follow up with four-year degrees remains to be seen. Certainly it is to be hoped that more four year institutions will actively recruit community college graduates into the teaching field, not an easy task on any level. About minority recruitment Haberman

(1989) says, "The problem of minority recruitment has proved so unyielding in large part because people select themselves into teacher education programs. Moreover, they make that choice primarily on the basis of their own school experiences, which have shaped their perceptions of what teachers are and what they do" (p. 772). And so we return, full circle, to the classroom on the reservation--in the small town--in the city. What perceptions are we instilling?

Native American Writers on Education

> ...although they (Indians) have no such tooles, nor any such craftes, sciences and artes as wee; yet in those things they doe, they shewe excellencie of wit.
>
> Thomas Hariot, Roanoke Voyages, 1584-1590

Through all the apparent maze of tribes, tendencies, traditions, trends, and tribulations that one finds in Indian education there has emerged an impressive cadre of Native American writers. These writers are, for the most part, educators, although we are not without relevant contributions from the fields of law, medicine, business, and government. Because teacher education is a complex area in the Indian world, it behooves those interested to acquaint themselves with the names and works of some of the more prolific writers. The following list is by no means comprehensive but it does provide a beginning point from which one can find further references. All listed have doctorates in their chosen fields, all can be found in the current literature, and with the exception of Lynch and Gilliland, all are Indian.

G. M. Charleston
V. Deloria
V. Dupuis
L. Elm
S. Fox
H. Gilliland
C. S. Kidwell
L. Little Soldier
P. Lynch
G. Noley
B. Ramirez
J. Reyhna
C. Ross
R. Swan
K. Swisher
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C. Wilkerson
B. Wright

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Whole Brain Learning, Learning Styles and Implications on Teacher Education

Phillip V. Shortman

Introduction

Since the publication of A Nation At Risk: The Imperative for Educational Reform (1983), education has remained a central issue on national, state, and local policy agendas. This has resulted in a barrage of reform recommendations in education. Since the report was reviewed and disseminated, a large number of states, the federal government, and private sector entities have increased funding for education while concurrently enacting new policies and programs focused on increasing performance standards for schools, students, administrators, and teachers. As a result, these plans have led to more standards, regulations and funds leading to more courses, more time spent in school, and more homework. These actions suggest that more of this and more of that will result in higher test scores, higher literacy rates, and increased graduation rates.

Although most educators accept, in general, the recommendations of the various commissions, and realize that many are realistic and necessary, attempts at correction to date have been varied. Reich (1988) has shown that although standards for schools have increased nationwide, performance has generally leveled off, lagged behind, or stagnated.

The recommendations for reform in education stem from the recognition that the United States economy, which had previously been the prevailing economic factor in the international arena since the conclusion of World War II, has decreased in comparison to other nations. This has been due to the educational and economic progress of the Pacific Rim Nations and member nations of the European Common Market. That is to say that there exists an international trend that dictates a shift from a labor intensive economy to a capital intensive economy. Hamburg (1989) states that the change to a Science and Technology society requires a workforce possessing technical competence and adaptability. This means that it will no longer be possible for an individual to survive without one of the following two things: (1) Credentials: one can no longer gain meaningful employment without a high school diploma. The minimum qualification for most jobs is an Associate Degree in a marketable area; (2) Capital: land, money, minerals, or some type of assets are necessary to obtain a lifestyle free of economic stress.

It is expected that the present/new economy will require a different and better educated student. As Schlecty (1985) says:

> Schools are not established solely to meet the needs of students, schools are established to meet societal needs as well, and the failure to take into account the needs of our economy for an intelligent and highly motivated workforce is a failure that cannot be endured (p. 16).

In addition to the expectancy of increasing school and educational standards, other issues exist which educational entities must address. Recent education reports have noted a projected increase of minority population in public education in the coming decades. It has been asserted that as the minority population increases, current education systems will produce an unprepared society unless they change dramatically.

According to a report entitled One Third of a Nation (The Commission on Minority Participation in Education and American Life, 1988), by the year 2000 almost 42% of all public school students will be minority children in poverty. The majority of the minority children will reside in areas below the poverty level, possess lower levels of educational attainment, and have a lower life expectancy. They will have higher infant mortality rates and other poverty-like SES characteristics. Hodgkinson (1985) confirms the minority growth projections and provides similar statistics that demonstrate other significant trends. His data projection indicate that in secondary and post secondary education, a substantial number of minorities are not matriculating through their high school years. Other statistics provided by the study have shown that in addition to a dwindling labor force, by the year 2000, 30% of the workforce will be minorities. These are the very groups now at the lowest level of the educational and economic ladder.

With the federal government pushing the states to rectify inequalities and improve educational outcomes on the local level, it will be the responsibility of teacher education programs to equip pre-service teachers with the knowledge and skills to address the learning needs of this culturally, economically, and socially diverse population. The preparation of capable and knowledgeable teachers is important because in current reports, schools are generally accused of being insensitive to students' backgrounds and of failing to provide services to some populations. Most instruction and curricula are now designed for middle class children.

Learning Styles

Inappropriate and mismatched learning styles are common threads which weave in and out of the literature describing a large number of learners' inability to achieve in the traditional classroom. We must increase effective education for all learners which encourages pre- and in-service teachers to examine the concept of learning styles more closely.

Today, as in the past, debate over classroom pedagogy is emerging as both educators and parents express interest in such instructional reforms as cooperative learning, greater participation in classroom tasks, and increased teacher and student use of computers. Cuban (1990) reports that despite efforts to move classroom practices toward student-centered approaches, there remains an abundance of teacher-centered instruction, sometimes called "chalk and talk" or "frontal teaching."

Peterson and Walberg (1979), citing the research of Rosenshine, Flanders, and Medley, characterize teacher-centered instruction as direct instruction with an academic focus, a teacher-centered focus, little student choice of activity, use of large groups rather than small groups for instruction, and use of factual questions and controlled practice in instruction. Open, student-centered instruction is generally referred to as a style of teaching involving flexibility of space, student choice of activity, richness of learning materials, integration of curriculum areas, and more individual or small-group than large-group instruction.

Current Hemispheric Research

Current studies in brain research (Ross, 1989; Vitale, 1982; Sperry, 1972; Orstein, 1972; Herrold, 1989) support the existence of hemispheric differences. Springer and Deutsch (1985) have presented a list of labels applied to the different functions of the brain. The left hemisphere is associated with verbal concepts, sequential, temporal, and digital through processes, logical and analytical thinking, rational action, functions associated with western thought. Examples of left-brain skills include the following: establishing concepts in sequence and maintaining the sequence in memory to come up with an end product such as sound blending, conducting an operation step by step as in the case of complex mathematical problems, deductive reasoning in which the student is provided with a set of rules that must be applied in sequential stages to come up with a solution, and proceeding through a text chapter by chapter, page by page, and skill by skill. Students demonstrating a left-brain preference usually excel in math, science, reading, and other similar subject matter that requires linear thinking.

The right hemisphere is associated with being nonverbal, visual-spatial, analogic, gestalt, synthetic, intuitive, functions associated with eastern thought. Examples of right brain skills include: having to view the whole picture before proceeding, recalling a whole word but not using phonics, remembering articles by where they are stored but not in the order in which they are stored, being efficient in brainstorming, finding numerous alternative solutions to a task, being flexible, and reviewing through a text to determine what the whole text is all about. Students demonstrating a right-brain preference in learning usually excel in art, music, and physical education and other similar spatially oriented subject areas.

In recent years since the inception of brain research and its implications for teaching and learning, it has become quite popular to be considered right-brained. This is largely due to the accusation that schools, in general, primarily teach left-brain skills. However, this argument provides no justification for failing to develop the left-brain capacity. The best learners are those who can effectively use both sides of the brain and know when to lead with the proper side.

Researchers in general agree that two separate halves of the brain exist, each controlling different anatomical functions, but the specific thought processes are still subject to speculation. Rickelman and Henk (1990) provide information on five technologies that are beginning to make an impact in the area of brain research using new medical devices. CAT (computerized axial tomography), MRI (magnetic resonance imaging), PETT (positron emission transaxial tomograph), RCBF (regional cerebral blood flow), and BEAM (brain electrical activity mapping) provide information about brain structure and function by monitoring either blood flow, hydrogen atoms, or electrical activity.

Using these new technologies, studies have been conducted with normal and dyslexic readers which have revealed that hemispheric brain symmetry differences exist between the two groups. Other findings suggest that the right side of the brain is much more active during reading than was once thought. Oral and silent reading processes are not identical in nature. Reading consistently involves certain brain sites, including specific parts of the temporal, frontal, and parietal lobes. Additionally, differences in activity levels exist between dyslexics who rely on sound cues and those who rely on visual cues. The excessive cost and complex medical language associated with the use of these technologies is foreign to most teachers and is likely to be prohibitive for educational purposes in the near future. However, educators should be prepared for the expanded influence these technologies will have on our knowledge base.

Cognitive Style Learning

The other line of research which attempts to explain the processes of learning and teaching retains a strong preference for the cognitive style dimension. Cognitive style researchers examine different instructional conditions in search of teaching and learning models. Messick (1976) describes cognitive styles as information processing habits representing the learner's typical mode of perceiving, thinking, problem solving, and remembering. Keefe (1987) states that cognitive styles are related to, but are different from intellectual abilities. The notable difference between the two is that abilities deal with the content of cognition; they tell what kind of information is being processed by what operation in what form. Styles, on the other hand, illustrate the process of cognition; they tell how information is being processed. Abilities measure specific innate capacities while styles are controlling mechanisms concerned with preference of performance. There exist numerous dimensions of cognitive styles ranging from simple to very complex.

As the studies mentioned above indicate, research results conflict regarding the theories of brain hemispheric preferences. The literature supports the idea that learning styles differ based upon brain hemispheric preferences. Nummela and Rosengren (1986) in their research on multidimensional teaching strategies cite the research of Hart who insists that credible researchers and learning theorists now generally agree that the brain is a powerful instrument that is not passive, that resists direct instruction unless it makes sense to it, that filters out most of what is presented to it, and then processes and reorganizes what it admits. He suggests that the more meaningful, relevant, and complex the external sensory input is, the more actively the brain will attempt to integrate and develop what he refers to as "program structures" or "proster." He defines these as a collection of stored programs; related to a particular pattern, such as letter recognition and other related concepts which can be used as alternatives. According to this definition, the most effective learning occurs when external sensory input challenges the student's brain to (1) "call up" the greatest number of appropriate programs, (2) expand an already existing program, and (3) develop new programs.

Keefe (1987) contends that "whole brain" education and right brain education is a metaphor for appropriate learning style analysis. His recommendation is the development and implementation of a flexible instructional application for the learner and advice to the teacher not to use those strategies developed exclusively for those learners demonstrating a right brain preference.

In other words, differing theories of the brain can be interpreted as supporting different instructional strategies, and among these strategies choices should be based as much as possible on their effects on the learners. Carnine (1990) points out that this is often difficult to put into actual classroom practice as demonstrated by the numerous research studies in the field of special education. Among the research problems are the following: (1) measures for identifying students' learning styles are not reliable; (2) relationships between learning-style strengths and academic performance are weak (e.g. the correlation between students' scores on tests of learning styles and their scores on reading tests was lower than the correlation between students' scores on reading tests and their scores on tests of math and computation); and (3) instruction matched to students' learning styles has had relatively weak effects on academic performance. It can be surmised that as research efforts intensify in the area of learning styles, there will continue to exist conflicting theories of how learners best process information. To date, the new research studies have had little, if any, impact on teaching practices. Direct teaching is still the norm, completely disregarding how individual learners process information. There has been sufficient documentation to realize that changes in school practices are needed. It is recognized by most educators that the traditional methods of instruction are more appropriate for teaching basic skills than for acquiring more complex cognitive skills.

There is little doubt that education in general should establish high yet realistic standards and assist all learners in meeting and surpassing those standards. However, looking at current school structure and instructional practices, schools seem to be assuming that all learners progress at the same level and learn the same way.

Cultural Learning Factors

In Barriers to Excellence: Our Children at Risk (1985), it was shown that tracking and ability grouping, the pattern most often used to organize schools and classrooms, is most prevalent in large schools and in racially and economically diverse schools. These systems provide educational services primarily to low-income and minority learners. It was concluded that widespread abuses exist in this process in which minority learners from low SES groups were found in disproportionate numbers in classes at the lowest track levels, and learners from upper SES levels were found to be over-represented in higher tracks. Minority learners easily discover that their inappropriate learning styles, use of learning materials, and general class performance become criteria used for tracking. Curriculum content, type of instruction, teacher-pupil interaction, and resource allocation tend to favor learners in higher rather than lower ability groups. If tracking and ability grouping were used effectively, schools would offer learners more flexibility; more remediation opportunities, and more chances to change tracks. Calabrese (1989) concurs and contends that public school policy toward adolescents operates through sanctions, tracking and leveling, economics, power, sorting and selection, and dependency. Policies related to these areas are applied to all students; however, they have a negative impact on minority students. Those minorities who rebel against such sanctions are required to conform or drop out of school.

Environmental factors such as poverty, poor nutrition, inadequate health care, substandard housing, lower quality education, and crowded living spaces may place lower socio-economic students at a greater risk and affect their learning when compared to more fortunate groups of students. Other significant factors, including low birth weights, asymptomatic lead poisoning, and neurological factors related to left-right hemispheres of the brain, contribute to the learning style a student may possess.

As an example of cultural differences in learning, Native American students are more reluctant to speak in class. Ainsworth (1984) demonstrates that they participate in fewer verbal interactions than their non-native classmates. McShane (1982) reported that on standardized tests Native American students score significantly lower than non-native students on verbal performance. Traditionally, tasks are taught by having the students observe the teacher and copy his/her actions. This is an instructional method that requires little verbalization.

Greenbaum & Greenbaum (1983) reported that Native American students often avert their eyes when a teacher is speaking to them. They also noted that Native American students often label non-native teachers as "mean" because they frequently speak in a louder than normal voice. As a sign of respect to elders, native children hang their heads when spoken to and are accustomed to low to normal sounding voices.

For many Native students co-existence rather than aggressiveness, cooperation rather than individualism, plus group status over individual status and achievement are the norm. These traits are reflected by the fact that competition is not stressed among many Native tribal groups, instead there is an emphasis for respect and a value for the individual, and as a result, the locus of control is internal rather than external.

Implications for Teacher Education Programs

In the absence of teacher training about culturally appropriate teaching and learning approaches and in the absence of special assistance and opportunities for orientation, learning itself becomes problematic. As previously mentioned, many minority learners are from cultures that differ from mainstream America; their thinking and learning processes are deeply related to their cultures and languages. This suggests that all teachers should teach in a heterogeneous setting which encourages cultural interaction, cooperative and individualized instruction. Divoky (1988) concurs and provides examples among the Asians and Pacific Islanders in the San Diego, California, schools in which the cultures of some groups display high expectations for achievement. Other Asian cultural groups possess a wide array of linguistic dialects. Many come from southeast Asia, may be suffering from post-traumatic stress syndrome and are considered to be at risk learners.

Zeuli and Floden (1987) caution that classroom interaction need not be culturally congruent despite overwhelming evidence that such practices have been beneficial in enhancing students' academic performance. They argue that substantial costs will occur in making curricula continuous with learners' everyday lives. Attempts to connect the curricula to a learner's everyday life impedes the learner's understanding of disciplinary concepts and restricts his/her range of vision. These researchers agree that ethnographic research can be of value in assisting pre-service teachers to become more reflective in their actions. They need to understand that these actions are culturally influenced and may influence the actions of others, and that individual differences do not imply deficiencies.

Liebert (1988) provides a description of the efforts of a Pacific Northwest college whose innovative approach to sensitizing pre-service student teachers to a multi-cultural world is proving to be successful. Pre-service student teachers are immersed in the Native American, Alaska Native, Hispanic, Native Hawaiian, and Asian American environments by becoming an integral part of the culture in which they are student teaching. An indicator of success is provided by the placement of 90 pre-service teachers into similar full-time teaching positions upon graduation.

School improvement literature has provided little attention to how alternatives to graded, self-contained classrooms can influence children's learning and enhance the professional growth of teachers. Anderson (1987) proposes a movement back toward the ungraded, team taught, multi-age pupil group in which cooperative teaching-learning is linked with differential staffing and shared space within an open education environment. Researchers studying these components may put together an individual learning profile suggesting the various ways in which the learner best receives instruction. Within such a structure, individual learners have a far greater chance of succeeding, and policies that respect learners and aid in their growth could have a positive impact. Sizer (1989) accepts this concept as a axiom and advocates the total redesign of the present school structure based on nine principles. General observations of these schools in his "Coalition of Schools" have shown that many differences exist among learners. He proposes a lower learner-teacher ratio to personalize the learning process. The personalization process may be a troubling responsibility for many teachers who subscribe to the teacher centered theory. Anderson (1987) agrees that this may be a problem as teachers work side by side with greatly differing perceptions of the educability of their students. These teachers have differing tolerances for disturbing misbehavior in the classroom, and they endorse, accept, and implement innovations differently.

Teacher educators seem to agree that pre-service classroom teachers need to learn a variety of instructional practices to serve the needs of a wide range of diverse learners. Glass and Putnam (1989) suggest that little attention has been given to cooperative learning in teacher education despite the research supporting the value of cooperative learning for learners' academic and social growth. The skills of sharing, helping, listening, goal setting, taking and maintaining responsibility, and providing feedback with one another are developed under cooperative learning conditions. Critical skills needed by teachers are also developed. These skills are necessary for the development of collegial working relationships, shared decision making, and other related group approaches such as the peer coaching concept. Rhodes (1988) advises that projects, individualization, peer teaching, reinforcement, non-threatening evaluations, structure activities, incubation time, private practice time, more movement, and freer time limits for individual experimentation all provide the variety that pre-service teachers need.

Sternberg (1990) advocates a thinking-style training process through which teachers are trained to accept the learner's ability to shift from one style to another as the situation warrants. This can be accomplished through staff development or in-service training programs over a prolonged period of time to familiarize instructional staff members with various methods of determining learner preference styles. Claxton and Murrell (1987) agree with this notion. Having information on style can assist the staff in becoming more sensitive to the differences learners bring into the classroom. Martel (1988), citing the research of Howard Gardner, advocates the application of the theory of multiple intelligences in which integrative learning trains faculty from all levels of the educational system in new teaching strategies and allows for the redesign of curriculum materials and class plans. It allows a much wider range of the population to understand courses and materials which in turn allows for greater success in learning and increased scores on standardized tests.

This information can also serve as a guide to the design of learning experiences that match or mismatch the individual learner's style. The experience of learning how to learn is an empowering process that can assist learners in becoming successful as life long learners.

Summary and Recommendations

In spite of the numerous studies that indicate that learners learn and function mentally differently from one another, limited strategies exist in the majority of schools for implementing various teaching and learning methodologies. To facilitate the necessary initiatives will require the analysis, assimilation, and distribution of new learning technologies to accelerate and expand the learning opportunities of large numbers of diverse learners who have found the present model of pedagogy frustrating and uninspiring.

In order to address the needs of future students, preliminary initiatives must be planned to prepare pre-service and in-service teachers to assist diverse learners in matriculating through the educational system. Graham (1989) argues for faculty staff development activities but recognizes that often faculty members are reluctant to change. Her hypothesis is that altering institutional mindsets and professional practices and actions is not an easy task, even when faculty seem receptive to new ideas and approaches.

Hart (1986) offers what could serve as a concluding comment when he suggests that instruction must be compatible with the nature of the brain, not brain-antagonistic like most classroom teaching. Brain-compatible instruction, in a non-threatening setting permitting uninhibited use of the neocortex, will result in far better learning, climate, and behavior.

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Expert Teachers as Guest Lecturers for Preservice Teachers: An Organizational Proposal

Robert Clemens

> A college freshman walks hesitantly into a noisy lecture hall and slips unnoticed into a seat by the aisle. She's both anxious and excited to be taking her first course in her major. She wants to be a teacher, a great teacher like Mr. Laranz, her high school biology instructor. Excellent teachers are truly needed in today's educational system, and she believes she can become . . . A hush suddenly settles over the crowd as papers are shuffled and notebooks snap. The door to the right of the podium swings open and the students turn their heads in unison to see who will be their teacher of teachers.

Who are our teachers of teachers? Upon what criteria are they selected and how do they maintain recency-of-experience? Certainly, they should be experienced, successful educators, academically proficient, fresh from the school systems, and free to devote all their energies to their task. But every year spent teaching in higher education is one more year's distance from the realities of teaching in basic education. Ducharme and Agne (1982) argue that wisdom and experience do not fade quickly. Yet skills get rusty and knowledge becomes obsolete.

Society is changing rapidly. Students change just as rapidly, exposed to changing television standards, a changing divorce rate, changing value systems, and changing career opportunities. The streetwise knowledge of a basic school educator is updated daily.

The college teacher, while facing some parallel situations, settles into a content area working with students who choose to participate in learning. Although college teaching may be equally difficult, daily working experiences are vastly different from those in basic schools. Teacher educators who are not in close contact with basic schooling are mostly effective at teaching instructional methods and theory. However, to provide the survival skills needed to work with basic school students and professional staff takes recent experience.

This paper proposes a practical solution to the recency problem faced by today's professors of education. The valuable experience of basic school teachers could be put to use by implementing a guest lecturer program at teacher education colleges and universities. These teachers could be part of an already existing course, or a whole course could be build based on their expertise, covering such topics as student behavior, school politics, rural/urban issues, and student attitudes. The selection of an expert teacher would be made by the school district following specific criteria established by the college or university. Then, the expert teacher would be sent to the campus for two weeks to teach preservice teachers.

Because this proposal is an organizational plan, many substantive issues, such as type of courses offered, length of teacher's visit, selection process, may be changed in implementing the plan.

Background of the Problem

With the recent scrutiny of teacher education by many study groups and commissions, teacher educators have been inspected, dissected, corrected, affected, and sometimes rejected. The basic questions raised pertaining to today's teacher educators are whether or not they are good teachers, what constitutes a good teacher, and whether or not someone else should be teaching teachers.

The present teachers of teachers are graduate students and professors. Although many graduate students possess excellent teaching abilities and many have been chosen from a pool of candidates, the university does not specifically search out the best teachers from school districts to come to the campus as graduate assistants. Sadly, it sometimes happens that the graduate assistant has no experience in teaching, turning the process into on-the-job training. But, for those who do have experience in basic school teaching, the recency of experience is a great asset. And, all graduate students, of course, have divided interests, with their goal to receive a degree usually their top priority. Generally, the major criteria for admitting a graduate student into a university is academic proficiency, and not teaching experience. In addition, since graduate assistants are so transient, education students receive less stability of presentation, evaluation, and guidance.

Professors of education, compared to basic school educators, have a strong knowledge base in education, especially in current educational research. Their experience in basic schooling, however, is not that impressive. Ducharme and Agne (1982) found that one out of every four teacher educators have no experience in basic schools and of those who are experienced, fewer than one out of three has more than nine years experience in basic schools. Of the teacher educators who had any experience in the basic schools, only 65% had teaching experience; the remaining 35% were department heads, counselors, or administrators. Rush and Wood's (1982) survey of teacher educators found a mean of only 2.74 years of K-12 teaching experience. This is unacceptable. Even if every teacher educator had substantial teaching experience in basic schools, the problem of recency-of-experience will still surface after several years of college teaching unless close contact is made with basic schools.

Other problems still remain. Teacher educators, according to Meyers (1984), are under pressure to redirect their efforts toward publishing books and articles and doing research to secure tenure, gain credibility, and get promoted. Ryan states, "The consequence of this redirection [of higher education institutions] is noted in the refocusing of faculty allegiance away from the institution and the community toward their academic discipline" (1978, p. 25). Cruickshank concludes, "Faculty who primarily instruct preservice students should be committed to preservice teacher preparation rather than graduate education or to an academic discipline" (1985, p. 107).

An interesting contrast to the view that teacher educators are out of touch with basic schooling are the provocative and somewhat dismal findings of Lanier and Little (1986), describing teachers and teacher educators as conservative conformists with middle to lower social class backgrounds. The implication appears to be that progressive concepts will tend to come from those most distant from either basic school or teacher education problems.

Ducharme and Agne (1982) point out that basic school teachers see preservice education as aloof from or out of touch with the field and current practices. In a similar manner, preservice professors often view field practitioners as conservative and shortsighted. Gore stated it succinctly when he said, "As things are now, our pedagogical knowledge impinges upon practice only obliquely, and teachers rarely conceptualize their work in relation to coherent theory. Collegial ambience cannot emerge from two separate worlds" (1981, p. 39). Ducharme (1986) proposes a solution to this critical issue:

> ". . . the importance of developing collaborative relationships in which the new becomes known, respected, and applied; where there is minimal cleavage and dissonance between higher education's knowledge and practice and those of the lower schools. This will not be an easy task to accomplish" (p. 53).

Collaboration is an obvious solution to bridging the gulf between higher and basic schooling. Cliff and Say (1988) identified five collaborative models:

1. a traditional preservice model
2. an inservice model
3. a research model
4. an exchange model
5. an alternative model

The proposal for using expert teachers as guest lectures would be classified within the exchange model. Although the name exchange model implies a trading of teachers between higher and lower schooling, any movement of staff, even if only one way, falls into this category.

The idea of exchanging a basic school educator with a higher school educator for one or two years would seem to be a logical trade benefitting both educators. Few teacher educators, however, are willing to spend one or two years in the basic schools once they have taught in the university. Time spent in the basic schools may disrupt research work, publication work, credits toward tenure, financial benefits, and personal lifestyles. One such exchange, reported by Farrell and Seidenman (1979), was done for the purpose of revitalizing the two educators. Professor Farrell spent the winter quarter teaching high school social studies part-time while Mr. Seidenman replaced Professor Farrell for the quarter at the university. Although both men reported tremendous personal benefits from the experience, there were some major institutional complications and the experiment was never established as an ongoing program.

Clarion University's Center for Education plans to try an exchange of five professors with five basic education teachers for about four months. The teachers will co-teach with the university faculty while the professors will "spend time" in the basic schools at a colleague level. The program's goal is to help reduce the isolation of rural teachers ("Grant to Study," 1989).

Cleveland State University initiated a Visiting Instructor Program in response to new standards for teacher education established by the Ohio State Board of Education in 1974. The new standards include improved collaborative efforts in teacher training and a maximum student-to-faculty ratio of fourteen to one. Additional state funds are made available, and the College of Education used them to reimburse the participating school district for the cost of replacing the expert teacher for the year. The districts nominated an expert teacher for participation in the program. In describing the program, Takacs and McArdle (1984) discussed the following advantages:

For the Prospective Teachers

1. A sense of current reality to the program.
2. A variety of classroom experiences.
3. Practical, contemporary answers to their questions.
4. Enhanced quality of supervisors.

For the Teachers

1. More intellectual growth.
2. Exposure to a greater variety of viewpoints.
3. An opportunity to share their own creative and innovative ideas.
4. The use of the university's resources.
5. The attainment of more professional recognition and subsequent motivation.

For the University

1. The university is able to meet state requirements for teacher education.
2. The professors become informed of current basic school issues.
3. The professors get a better sense of teacher attitudes.
4. The university establishes contacts for research in the field.

Auger and Smith (1986) describe a similar program that has been operating for more than twenty years at the University of New Mexico. In exchange for the services of an expert teacher for two years, the university supplies two intern teachers to staff public school classrooms at a ratio of two interns to one teacher. The teachers are used as clinical supervisors and become members of teaching teams with university faculty. They teach methods courses and later move out into the schools to provide supervision of student teachers.

Most of these exchange programs are currently implemented. Many respected educational leaders have called for similar plans to strengthen teacher education. Orlosky (1988) feels that board-certified teachers [a projected national recognition credential for outstanding teachers] might be especially helpful to preservice teacher education programs at colleges and universities as adjunct professors. He also feels that classroom teachers working on campus as course instructors, supervisors, and department participants, receive satisfying intrinsic rewards in terms of professional exchange and mutual respect. Even closer to this paper's proposed program is Boyer's (1983) call for a series of one-day common-learning seminars for preservice teachers presented by outstanding scholar-teachers.

While each plan has distinct advantages when used in a particular context, none is designed as an organizational framework that can be modified to fit various teacher education programs. In contrast, the expert teacher as guest lecturer proposal was conceived with such modification in mind.

Proposal for Expert Teachers as Guest Lecturers

The proposal is based on two assumptions:

1. The teacher education program recognizes the need for recency and diversity of experience within its teaching staff.
2. School districts recognize the need to acknowledge and reward their outstanding teachers.

A teacher education program, after determining the types of expertise and experience it needs, offers a two-week guest lectureship to qualified expert teachers. The guest lecturers would have adjunct professor status and receive an honorarium from the university. The course professor, while maintaining his or her responsibility and authority for the course, functions in a collaborative role with the guest lecturer.

The school district, after determining its outstanding teachers, attempts to match some of these teachers with the university's criteria for the designated positions, and encourages teachers to submit an application to the program. In support of the teachers selected, the district would provide substitute teachers, promote local public acknowledgement of the teacher's selection, and supply remuneration for travel.

In planning a teacher education course, the education department or the professor of the course would determine the areas of expertise and the levels of experience needed for each two-week unit of instruction. A list of fairly specific criteria for each appointment would be sent to interested school districts. The districts would attempt to match the criteria to the expert teachers on their staff.

The purpose for the specific criteria is to supply guest lecturers who are truly expert in an area and who represent a variety of racial, social, economic, geographic, and academic backgrounds. For example, the criteria for a guest lecturer who would be teaching a unit covering classroom discipline might include: Ten years minimum experience in three districts (one of which is urban), experience in both a classroom and an activity area, and a member of a committee designed to address both classroom and building discipline problems. The specific criteria will also tend to prevent purely political recommendations from a school district. The professor selects the candidates and may, after working with them and observing their instruction, request a reappointment for the following year for those who are exceptional.

After selecting a particular teacher, the professor would supply the teacher with lesson goals and objectives, and later, the teacher would submit tentative lesson plans. The teacher would visit the university for a few days during the summer to meet with the professor, become oriented to the campus, and finalize the lesson plans. When the teacher arrives on the campus in the fall or spring for the actual instruction, he or she would bring a videotape of a typical lesson or a prepared simulation from an actual school situation.

The teacher's recency of experience combined with the videotaped lesson give the students a realistic insight into applied pedagogy. Such experiences would better prepare students for their field experiences, making the field experience more meaningful. Perhaps having both the professor and the basic school teacher working together in the college classroom would enable the students to combine the theoretical and the practical when they leave the campus to do their student teaching.

The exchange programs discussed earlier address several common problems: orienting the teacher to the campus, establishing positive public relations, and determining who pays for the various expenses. In this program, two students would be assigned to host a particular guest lecturer for the two-week period. This could help alleviate the orientation problems for visiting instructors as reported by Takacs & McArdle (1984).

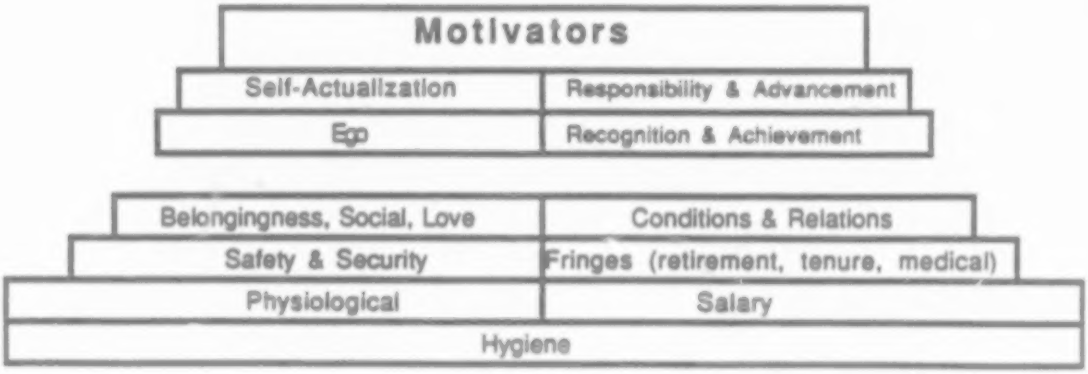
The expenses certainly need to be considered if the proposal is to have any practical validity. If the university cannot provide an honorarium, it should certainly provide a room for two (spouse or two teachers) in a graduate dormitory, the meals in a campus dining hall, and either graduate credits, tuition credits, or both.

The school districts should provide travel expenses and substitute pay as they normally do for professional development programs. In the advent the university cannot pay an honorarium, perhaps the school district could work with a local business firm or community organization to establish an outstanding teacher award that would include an appropriate grant.

If a school district recognizes the need to acknowledge outstanding teachers, it could partially meet this need through an interdistrict newsletter, a community newsletter, a news article in the local newspaper, a staff awards assembly, a professional association newsletter, or some similar media event (The university, of course would send a letter of appreciation to the teacher and the local school board).

So far, I have discussed the proposal from an organizational standpoint, without consideration for the expert teacher's motivation (besides the honorarium) for taking on this extra workload. Why would a teacher leave his or her classes for two weeks, prepare several lessons, travel twice to another city, and present these lessons with no financial compensation? Kaiser (1981) addresses this very issue using a motivational chart based on Maslow's and Herzenberg's theories of motivation (see Figure 1). Lower factors, such as safety, are placed at the bottom, with higher levels, such as self-actualization, nearer the top.

Figure 1
Personal and Job-Related Factors of Motivation


Motivators
Self-Actualization
Responsibility & Advancement
Ego
Recognition & Achievement
Belongingness, Social, Love
Conditions & Relations
Safety & Security
Fringes (retirement, tenure, medical)
Physiological
Salary
Hygiene

(Kaiser, 1981)

Kaiser claims that true motivations are elements that supply the higher order needs. Money is placed on the physiological need level, implying that it is not a motivation factor because it has essentially been met. Actually, the status of money, not the money per se, helps meet the need for recognition and achievement. As such, money is a motivator. However, there are other motivators of equal value, such as titles (Master Teacher or expert teacher), membership in a status group (Board Certified Teachers, see Orlosky, 1988), responsibilities, and autonomy in scheduling (Whaley and Wolfe, 1984). Just the variety of experience may be a sufficient motivation for many educators.

Other possible rewards could be certification renewal credits, tuition vouchers, or increased input and control in the curriculum. Lanier and Little (1986) show that in education today there are few opportunities for experienced colleagues to distinguish themselves from novice teachers. This guest lecturer experience certainly offers a teacher the opportunity to receive recognition, to accept more responsibility (higher level, not quantity), and to have more direct input into their profession. The "spreading out" of the levels of expertise within the teaching profession allows for an increased amount of motivation for all levels of the profession.

Some interesting options are easily incorporated into this proposal. The program could be opened not only to teachers. Other professional educators could be invited--administrators, school board members, school counselors, school psychologists, and so on. It may also be appropriate to invite a successful first or second year teacher to provide valuable experiences concerning adjustment and resocialization to the profession.

Conclusion

This proposal for expert teachers as guest lecturers represents a collaborative effort between higher and basic education for the benefit of teacher education students. The students benefit through exposure to the latest research-based knowledge, the most fresh and practical knowledge available; they also benefit from instruction by teachers of diverse backgrounds and multiple successful teaching styles. The university benefits by having an outstanding teacher education program that is in close touch with working practitioners and has close ties to the public and private school systems. School districts also benefit through closer contact with the university as well as a more professional working relationship with their teachers. And, of course, the teachers benefit from increased self-esteem, increased professional knowledge, and expanded educational perspectives.

This proposal is an attempt to solve one of the weaknesses of American teacher education programs. Collaboration is an important key, not only within the schools, but also between them. So easily we lose sight of the dependence that higher and basic schooling have on each other.

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New Staff Induction Programs: The State of the Art

Carol Blundell

As we begin the 1990's and prepare to enter the 21st century, it is truly an exciting time to be involved in education. New directions are slowly and steadily emerging in staff development for educators. The continued training of teachers and administrators is a vital issue as the nation focuses on school improvement goals which are needed to meet a changing society. Increasingly, public discontent with the nation's schools is serving as an impetus for a closer examination of past practices (Hoffman, et al., 1986, p. 16). Staff development is beginning to be seen as an on-going learning experience that begins as new teachers enter the profession and continues throughout the educators' careers.

Induction programs for beginning teachers are in the forefront of the staff development movement. Two decades of research support the fact that first-year teachers typically find the teaching experience stressful and frustrating. Most new teachers experience high levels of anxiety, but frequently do not receive the emotional and technical support they need from colleagues and administrators in their schools. The plight of beginning teachers is well documented in the educational literature. (Applegate, Flora, and Lasley, 1980; Burke and Schmidt, 1984; Grant and Zeichner, 1981; Hoffman, et al., 1986; Johnston and Ryan, 1980; Lortie, 1975; Odell, 1986; Veenman, 1984).

The early problems new teachers experience stem in part from the "abruptness with which full responsibility is assumed" (Lortie, 1975, p. 59). Traditionally education majors complete student teaching in the spring and become fully responsible teachers in the fall. It is unrealistic to expect that the practice teaching experience can fully prepare prospective teachers for all eventualities they will experience during their first year in the profession. However, teaching perhaps more than any other profession, has historically left new teachers to "learning while doing." Provisions for support for new staff within school systems and teacher organizations have, in most cases, been minimal. Lortie (1975) has highlighted several salient points relative to this issue.

> The cellular organization of schools constrains the amount and type of interchange possible; beginning teachers spend most of their time physically apart from colleagues.
>
> Fully responsible for the instruction of students from the first working day, the beginning teacher performs the same tasks as the twenty-five year veteran.
>
> Tasks are not added sequentially to allow for gradual increase in skill and knowledge; the beginner learns while performing the full complement of teaching duties.
>
> Since the beginners spend so much of their time away from other adults, it falls upon them to discern problems, consider alternative solutions, make a selection and, after acting, assess the outcome (p. 72).

Lortie also suggests that problems ensue for beginning teachers because the teaching profession has not yet been able to define a common technical knowledge base.

> The absence of a common technical vocabulary limits a beginner's ability to "tap into" a preexisting body of practical knowledge. Without such a framework, the neophyte is less able to order the flux and color of daily events and can miss crucial transactions which might otherwise be encoded in the categories of a developed discourse. Each teacher must laboriously construct ways of perceiving and interpreting what is significant. That is one of the costs of the mutual isolation which attends the absence of a common technical culture (p. 73).

The high attrition rate among new teachers also supports the conclusion that the induction period is a crucial time for beginners. Induction programs are a must if the profession expects to remain strong (Hitz and Roper, 1986; Varah, Theune, and Parker, 1986). Huling-Austin (1986, Summer) reports,

> Extreme diversity in beginning teacher retention rates exists among districts and states. Nationally, however, approximately 15% of the beginning teachers leave after their first year of teaching as compared to the overall turnover rate of 6%. . . . An additional 15% of beginning teachers will leave after their second year and still another 10% will leave after the third year. The turnover rate of new teachers does not

> reach the overall rate of 6% until the fifth or sixth year. Of all beginning teachers who enter the profession, 40-50% will leave during the first seven years of their career, and in excess of two-thirds of those will do so in the first four years of teaching (p. 54).

Ample evidence exists within the research literature to support the need for school districts to implement induction programs for new teachers entering the profession. The process of introducing beginning teachers to a school system is complex and careful planning must precede implementation. Three basic aspects will be addressed within the scope of this paper: (1) concerns of beginning teachers; (2) mentoring; and (3) collaborative projects between systems of higher education and public schools. In addition, Pennsylvania's induction program will be briefly described as one example of a state-mandated process for induction.

Concerns of Beginning Teachers

Identifying the problems and concerns of beginning teachers is an important issue to address when developing new teacher induction programs. Educational research contains numerous studies which have attempted to identify the areas of concern expressed by new teachers. Discipline and classroom management consistently appear at the top of most lists of problems. Varah, Theune, and Parker (1986) cite several studies in which this is the case (Dropkin and Taylor, 1963; Elias, Fisher, and Simon, 1980; Grant and Zeichner, 1981; Houston, et al., 1979; Lortie, 1975; Ryan, 1970; Veenman, 1984). Questionnaires and sometimes interviews, administered at the end of the first year of teaching, are the most common method of gathering data from beginning first-year teachers (Odell, Loughlin, and Ferraro, 1986; Veenman, 1984). These studies have included teachers from a wide variety of situations, and consequently, the teachers received varying degrees of support during their first year.

Veenman (1984) completed a rather thorough international bibliographic search which yielded 83 studies dealing with perceived problems of beginning teachers. Of these studies, 55 were from the United States, 7 from West Germany, 6 from the

United Kingdom, 5 from the Netherlands, 4 from Australia, 2 from Canada, 2 from Austria, 1 from Switzerland, and 1 from Finland (p. 148). Veenman identified 24 common problems perceived by new teachers. In priority order, the first ten include:

1. Classroom discipline
2. Motivation of students
3. Dealing with individual difference among students
4. Assessing students' work
5. Relationships with parents
6. Organization of classwork
7. Insufficient and/or inadequate teaching materials and supplies
8. Dealing with problems of individual students
9. Heavy teaching load resulting in insufficient prep time.
10. Relations with colleagues

(p. 154-155).

All of the studies in Veenman's survey used questionnaires and/or interviews to gather information from first-year teachers.

From the research literature, Veenman also reflects on the developmental stages of concerns teachers experience during their early years in the profession. In the first stage labeled survival, teachers primarily are concerned with their own adequacy and survival as a teacher, class control, being liked by pupils, and being evaluated. The second stage involves teaching situation concerns including the limitations and frustrations in the teaching situation, methods and materials, and mastery of skills within the teaching learning situation. As teachers move into the third stage, their concerns begin to shift from themselves to their students. Teachers become concerned about student learning and the social and emotional needs of their pupils. In this phase, teachers begin to view students as individuals (p. 161).

Obviously, these stages represent general phases through which teachers pass and are not specific to situations or individuals. However, data of this nature is helpful when organizing topics and sequencing general activities for induction programs. The data would suggest that early in the teacher's first year, assistance should focus on "survival" strategies for the classroom, later move into teaching strategies, and perhaps late in the first year, or early in the second year, a shift can be made to student needs. Experienced educators need to use caution and not present "too much too fast" or frustration and confusion will result rather than the positive support which is the goal.

Odell (1986) approached the examination of teacher problems from a different perspective. At least three important aspects of Odell's study were different from most studies found in current literature. First, the author used a functional approach when examining the problems most frequently experienced by beginning teachers. Odell gathered data by recording what help was asked for by new teachers and by observing what aid was offered by the district support teachers during the new induction process. The study was ongoing during the entire first year.

Secondly, the study included both first-year teachers (86) and "new to system" teachers (79). Most of the induction studies focus only on first-year teachers (Veenman, 1984). The numbers for each group of teachers in Odell's study were nearly equal. The "new to system" teachers had an average of 5.6 years of prior teaching experience in other settings.

Thirdly, all the teachers in the study participated in a well organized district induction program which was coordinated by a university-based teacher induction program director. This set-up is more likely the exception rather than the rule.

Programs for the induction of new teachers have not yet been implemented on a large scale. (Ashburn, 1986-87; Veenman, 1984).

The differences just described probably contributed to Odell's conclusions that (1) help in obtaining fundamental information about the school district and (2) help in obtaining resources and materials pertinent to the information to be taught were the priority needs of beginning teachers rather than discipline, as frequently cited.

One reason the Odell study did not identify discipline as a priority concern may have been, in part, because almost half of the new teachers were "new to the system" but were not actually beginning teachers. The experienced teachers may have developed effective strategies for handling discipline problems during past teaching experiences. It would then seem reasonable that these teachers would be more concerned with learning the procedures in a new school setting and with becoming familiar with new teaching materials.

In addition, the teachers in the study also had the advantage of on-going support with instructional strategies which would include effective ways to deal with discipline. This is not the case for many teachers (Grant and Zeichner, 1981; Rauth, 1986).

Odell's functional approach clearly showed that teachers' needs continually change throughout the year. Odell, Loughlin, and Ferraro (1986-87) state,

> The questionnaire approach has been successful in chronicling the problems most often perceived by beginning teachers (e.g., disciplining students and dealing with individual differences). However, this approach has the disadvantage of being static and retrospective. That is, it does not continually track how new teacher needs change dynamically across time, nor does it provide a contemporaneous description of teacher needs that can be used to specify current assistance needed by new teachers. The questionnaire approach also has the drawback of yielding self-report data that may be unreliable (p. 52).

The functional approach yields more specific information about problems beginning teachers experience. This information should prove helpful in tailoring instruction programs to meet the "real" rather than "perceived" needs of beginning teachers. Odell concludes that,

> 1. Clearly any induction support program should not focus purely on the professional aspects of teaching; the teacher has strong emotional and interpersonal needs that seek fulfillment as well.
>
> 2. Managing and organizing the school day was a particular need that merited support at three points in the school year: at the beginning of each semester, in September and January, and at the end of the school year, in May.
>
> 3. The need of the new teacher to have help in working with parents seems to have remained strong only through the end of the first set of parent conferences in November, abating thereafter even in the face of subsequent parent conferences (p. 55).

More functional studies like Odell's would add to the knowledge base relative to the concerns beginning teachers experience throughout their first years of teaching.

Mentoring

> "As a novice teacher, I did not always know how to convert good intentions and enthusiasm into effective educational teaching. Fortunately, an experienced teacher acted as my guide and mentor.--Mentor Teacher"
>
> "After so many years, it is refreshing to have ongoing communication with someone who comes to the profession filled with enthusiasm and fresh ideas.--Mentor Teacher"
> Loucks-Horsley, et al. (1987, p. 86)

Mentoring is frequently cited in current research literature as a promising practice for inducting new teachers into teaching (Anderson and Shannon, 1988; Burke and Schmidt, 1984; Gehrke, 1988; Gehrke and Kay, 1984; Hoffman et al., 1986; Huffman and Leak, 1986; Huling-Austin, 1986, Summer; Loucks-Horsley, et al., 1987; Schlechty, 1985; Sergiovanni and Moore, 1989; Varah, Theune, and Parker, 1986). Veteran teachers, acting as mentors, can be positive role models who provide needed non-evaluative support and encouragement to beginning teachers. Apprenticeships or internships which include mentoring have existed for a long time in other professions such as law, medicine, and architecture. The new professional puts knowledge into practice under the watchful eyes of those who have years of practical knowledge in the profession. Traditionally, the isolated environment of teaching has kept the new teacher from receiving such assistance from experienced teachers. In isolated cases, some beginning teachers have been fortunate to receive guidance and support from seasoned teachers. When such relationships have developed, new teachers have stated that the experience played a significant role in their growth as professionals (Loucks-Horsley, et al., 1987, p. 86).

As collegial relationships among teachers become more commonplace, serious consideration is being given to induction in general, and the process of mentoring is gaining recognition as a viable means of providing induction support for beginning teachers. Loucks-Horsley, et al. (1987) have discussed the underlying assumptions that support mentoring.

> 1. Induction into the teaching profession is a unique period, quite possibly the most difficult phase of a teaching career. . . . Newcomers need to know that teaching is never problem-free and that the beginning is uniquely challenging. They need to know that others have experienced the problems they now face, and they need assistance to see that the problems become variables related to growth and not obstacles leading to withdrawal from the profession.
>
> 2. Beginning teachers come into the profession with many advantages that, if nurtured and channeled properly, can add positively to a school. Coming fresh from preservice training, beginning teachers have often been exposed to the latest ideas in subject-matter pedagogy and effective teaching research. They are usually enthusiastic, energetic, idealistic, and determined to do the best they can; and they are ready to channel this energy and commitment into their work. What all too often happens, however, is that when faced with the kaleidoscope of challenges and demands of the first year(s), they soon begin to experience doubts, frustrations, and anxieties that block chances for growth and creativity. The guidance of a mentor can significantly increase the likelihood that the beginning teacher will see these challenges and demands as opportunities for growth.
>
> 3. Those who are new to the profession can benefit from the support and expertise of skilled, experienced practitioners. The teaching profession is strengthened by the vast numbers of dedicated, talented teachers who are skilled in both the art and science of teaching. These experienced teachers offer many benefits to the beginner. They have wisdom, insights, and

> practical knowledge that can both promote and enhance the professional development of the new teachers (p. 87-88).

Mentoring is a complex process which requires careful planning, organizing, and adequate training for the mentor teachers. Mentors must possess, or be able to acquire through training, many interpersonal and supervisory skills. Loucks-Horsley, et al, (1987) have defined a mentor "as an experienced adult who befriends and guides a less experienced adult. In doing so, mentors can serve many roles: teacher, coach, role model, developer of talent, sponsor, protector, opener of doors" (p. 87). For most teachers entering a mentoring relationship, many of these roles are new and will require time to develop. Mentors must have ability to put theory into practice and be reflective about their own teaching. In addition, they have to be able to remember what it was like to be a beginning teacher and to perceive the needs of the new teacher. Mentors also must be willing to make a commitment of extra time and energy beyond their regular teaching responsibilities.

However, mentoring is not a "one-way" relationship. Mentors also receive benefits from the experience. Hawk (1986-87), in a research summary of a North Carolina mandated induction program, reported findings from a questionnaire which was administered to one hundred seventy-eight mentor teachers. More than two-thirds of the mentors felt that the mentoring experience provided them with positive professional growth. The teachers felt that serving as mentors forced them to focus on and improve their own teaching skills. The experience also made them more aware of the need for educators to communicate with each other. Hawk indicates "that educators should look not only at the direct effects that teacher induction programs have on beginning teachers, but also at residual effects that such programs have on all involved professionals" (p. 63).

Factors Needed for a Successful Mentoring Program

Several factors have been found which contribute to the success of the mentoring relationship between new teachers and experienced teachers (Gray and

Gray, 1985; Huffman and Leak, 1986; Huling-Austin, 1986, Summer; Loucks-Horsley, et al., 1987; Thies-Sprinthall, 1986). These factors include:

1. selecting highly competent and experienced teachers to serve as mentors;
2. providing training for mentors including skills in clinical supervision, principles of adult learning and knowledge of teaching strategies supported by current educational research;
3. receiving ongoing support from administration;
4. providing time for beginning teachers and mentors to observe each other teaching and confer together frequently, both informally and formally;
5. having teachers work together who teach the same discipline and/or grade level whenever possible;
6. having teachers paired together who teach in the same building and whose classrooms are in close proximity to each other;
7. pairing teachers who are compatible in professional philosophy.

School systems desiring to implement mentoring programs must make a commitment for extensive inservice training for teachers who choose to become mentors. Thies-Sprinthall (1986) suggests that the inservice training should be based on theory and research and should include intensive training in supervisory skills. Training should be school-based, on-site, and occur over a considerable time period. "The obvious side benefit to any such systems is the indirect effect of such training. The mentors themselves become better classroom teachers, all the while doing so under conditions of low threat. They want to improve in order to model for a beginner" (p. 19).

The positive value of mentoring has been substantiated through questionnaires and interviews with new teachers who had opportunities for mentor assistance during their first year of teaching. Huffman and Leak (1986) conducted a study involving 108 new teachers who had experience with mentors. The teachers were asked to give their impressions about mentoring through questionnaires. Findings from the study include:

- 96% of respondents endorsed the mentor role as an important element of the new teacher induction process.
- 93% of respondents responded affirmatively to the question, Should the mentor teacher the same grade and/or subject as the beginning teacher?
- 67% of respondents ranked "informal conversation" with the mentor as the activity they valued most highly.
- Mentors were perceived as having provided help with many facets of teaching including classroom management, district policies, curriculum, instructional materials, building procedures, and organization of time.
- "The mentor was viewed as a friendly critic who gave constructive criticism" (p. 23).
- Mentoring provides new teachers with someone who is genuinely interested and can be asked questions big and small.
- "Support and encouragement were terms repeatedly used in describing the benefits of a mentor" (p. 23).

While mentoring is strongly endorsed as a valuable component of new teacher induction programs, it is important to mention that the mentoring process may not necessarily be appropriate for all beginning teachers. Gehrke and Kay (1984) point out that not all people who have become successfully functioning teachers have had the benefit of a mentor. Gray and Gray (1985) strongly advocate making mentoring voluntary. It would seem that new teacher induction programs will be most effective when provision is made to include options in order to accommodate individual differences in learning styles among teachers.

University-School System Partnerships

Another promising practice related to new teacher induction programs involves the teaming of universities with school systems to provide support for beginning teachers cooperatively. Emporia State University has begun a collaborative effort working with seventeen small rural school districts which cover a geographical area of 1500 square miles. During the first year of the program, the university offered a series of three-hour seminars for beginning teachers. Participation in the program was voluntary and topics for the seminar were announced in advance. The seminars were structured to include a brief exposition of theory based on participants' questions related to chosen topics, informal discussions, and analysis and application of ideas presented. McEvoy and Morehead (1986-87, Winter) reported the unique features of the partnership between Emporia State University and local school districts.

> First, and perhaps most importantly, it is specifically designed to enhance the development of reflective practice and collegial interchange.
>
> Second, because it is university based, it acts as a practical and meaningful extension of the professional training begun in preservice courses.
>
> Third, because it does not contain a formal evaluation component and because it is not formally aligned with local or state evaluation and certification practices, it provides the beginning teachers with a forum for facing and dealing with their induction problems freely, without fear of professional repercussions.
>
> Finally, it is a collaborative effort designed to facilitate induction in multiple districts. Although teacher isolation may be compounded by rural settings, multi-school networking can benefit any school or group of teachers (p. 46).

Cleveland State University has also implemented a cooperative induction program with local school districts. While the administration of the induction program is under the direction of university faculty, four master teachers from four school districts deliver the instruction in the program. The program consisted of a course in which the goals were:

> (a) to facilitate participants' understanding of the socialization process by which new teachers become accepted, fully-functioning members of a faculty; (b) to provide additional clarification of the varied roles and responsibilities of teachers; (c) to promote effective teaching; (d) to foster the development of professional behavior; and (e) to encourage continued commitment to the teaching profession (Zaharias and Frew, 1987, p. 50).

The tuition was waived for the course. The thirty-nine participants successfully completed the course as well as their first year of teaching. Ninety-two percent of the participants felt the course was beneficial. Sixty-two percent of the participants felt their teaching had improved as a result of the program. The teachers gained confidence, were more open to new ideas, and understood better how their actions affected students, parents, and administrators (Zaharias and Frew, 1987).

In an attempt to meet the needs of recently graduated and certified teaching candidates, the University of Wisconsin-Whitewater has developed a teacher induction program in cooperation with local school districts. Participating school districts encourage all first-year teachers to become involved. The first step is to form an Induction Support Team consisting of inductee, representative from the school's central administration, a mentor teacher, and a university consultant. The university provides a tuition-free three-credit graduate course for mentors. "The major emphasis of the course is to identify the characteristics of an effective teacher, to develop conference techniques with the inductee in self-evaluation procedures, and to become proficient in supervisory methods" (Varah, Theune, and Parker, 1986, February, p. 32).

The results of a questionnaire completed by participating teachers, both mentors and inductees, showed that the program was successful in helping new teachers make a transition from the university to a public school system. Administrators reported that the first-year teachers in the program had fewer student referrals, fewer parent calls, and fewer student complaints than first-year teachers in previous years. "In addition, this interaction provides university personnel with an opportunity for direct involvement in the transition from preservice teacher education to inservice teacher development and provides university faculty with an opportunity to study the specific daily needs of first-year teachers" (Varah, et al., 1986).

Thies-Sprinthall (1986) suggests that mentor programs will become problematic if adequate attention is not given to developing substantial training programs. The author's examination of research on current programs shows that many provide only superficial two- or three-day workshops for prospective mentors. She states:

> A careful task analysis of the supervision role would indicate that it is more complex than effective teaching, which is itself highly complex. Competent performers in any area cannot automatically analyze their own performance, figure out the sequence of elements, and then prepare a sequenced induction process for the neophyte. This may be even more true for teaching. Research, unfortunately, indicates that most experienced teachers are not particularly thoughtful or reflective about the process (p. 14).

Thies-Sprinthall strongly recommends extensive inservice training as a crucial factor in developing effective mentors.

Thies-Sprinthall developed and implemented a model mentor training program in two school districts in North Carolina. This came about as a result of a state mandate requiring school districts to provide induction support for beginning teachers. The program involved a two-semester seminar and practicum (total 45 weeks--3 hours per week) during the first year. During the second year, the districts ran their own year-long inservice training programs for mentors. At first, the participating teachers were concerned about the commitment of so much time in addition to the time required for their regular teaching assignment. However, at the conclusion of the program the teachers felt the training had been beneficial in making them more effective teachers in their own classrooms. In addition, their understanding of teaching and supervision reached higher levels of complexity. The author derived the following implications from the program:

1. It is clearly possible for school systems to create a new role for teachers as inservice teacher trainers and revitalize an experienced staff with new responsibilities.
2. For induction programs to work, systematic intensive supervision is requisite for beginning teachers.
3. Mentors become better classroom teachers under conditions of low threat (p. 18-19).

Although the author concludes that school districts can and should develop model training programs without waiting for university input, she has at the same time, demonstrated how university personnel can effectively serve as the impetus for initiating mentor training programs within public schools to bridge the gap for new teachers entering the profession.

Each of the four partnership programs described in this paper have individualized their approach in providing support for new teachers and mentors, and yet even though different, each program has produced very positive results. This would lead one to conclude that flexibility and individualization will be key ingredients in making partnerships work effectively. University-school system partnerships indeed appear to be a viable way to provide support for beginning teachers and mentors. All educators involved in the process stand to gain from the experience. We will see more exploration of this approach to induction in the future.

State-Mandated Beginning Teacher Induction Programs in Pennsylvania

As interest in induction support for new teachers continues to grow, more states are moving toward mandating such programs within their public school systems. Pennsylvania is one of the states which now requires school districts to provide induction support for all first-year teachers. Pennsylvania began the process in 1987. All school districts in the state are required to develop new staff induction plans. The Pennsylvania Department of Education conducted regional seminars on induction to assist school districts with development of their plans. At that time, the concept of teacher induction was still relatively new to many of the 501 school districts and the Department was only able to provide very general guidelines. The approval process was slow as many district plans were returned and more "details" requested. Finally the induction process was put into effect during the 1988-89 school year. At that time, a year of induction support became mandatory for all newly certified teachers. Induction activities must be documented for each new teacher because this experiences is part of a requirement for permanent certification. Induction support became mandatory as other certification requirements were revised and updated.

As the 1990-91 school year draws to a close, new teacher induction programs will have been in place for three years. Beginning in 1991, the Pennsylvania Department of Education is implementing a process to review and update the original induction plans over a three year period. The revised induction plans must include a mentor relationship between a first-year teacher and the induction team. Mentoring may be provided by an individual or through a team effort. District induction plans are to focus on achieving the following goals:

Primary Goals

1. To provide continued assistance to reduce the problems known to be common to beginning teachers.
2. To support development of the knowledge and the skills needed by beginning teachers to be successful in their initial teaching positions.
3. To integrate beginning teachers into the social system of the school, the school district, and the community.

Secondary Goals

1. To provide an opportunity for beginning teachers to analyze and reflect on their teaching with coaching from veteran teachers.
2. To initiate and build a foundation with new teachers for the continued study of teaching.
3. To increase the positive attitudes of beginning teachers about teaching.
4. To increase the retention of good beginning teachers in the profession.

> Guidelines for Developing and Implementing Teacher Induction Programs (TIPS), Pennsylvania Department of Education, January (1990).

The planned activities included in each school district plan are to relate to these goals.

The Pennsylvania Department of Education, with the help of the Professional Preparation Committee of the Pennsylvania Association for Supervision and Curriculum Development, has compiled a document containing current research on teacher induction. The research reported there, although not exhaustive, represents the major findings in the field. Each district received the research document along with a set of the new induction guidelines. It is hoped that most districts in the state utilized the research data as references when they planned, implemented, and evaluated their programs for new teachers. If they did, the state-mandated new teacher induction system in Pennsylvania will be strengthened substantially.

Conclusion

For many school districts, entry year assistance for new teachers is still a relatively new concept. In the past, teachers were usually expected to somehow "magically" make the transition from college to public school teaching on their own. Little support was provided and teachers basically spent their days in isolation from their colleagues. Burke and Schmidt (1984, Spring-Summer) have stated, "Alone in a classroom, with only trial and error as a guide, beginning teachers enter the profession of teaching with a hope and prayer" (p. 71).

Across the country in increasing numbers, school districts are implementing programs to meet the needs of beginning teachers. The first year of teaching is a difficult time for teachers as they attempt to bridge the gap between the academic world of the university and the reality of the classroom. No preservice teacher program can adequately prepare students for their first year adjustment period. Therefore, it is crucial for school districts, and staff developers in particular, to assume the major responsibility for orienting new teachers to the teaching profession. In some cases university professors are joining in the effort.

A collaborative teacher induction program can be an effective means of strengthening the performance of new teachers, if the program is developed around a strong, clear conceptual framework supported by research. Varah, et al. (1986) have succinctly summarized the major purposes of teacher induction.

> The major purposes of the experience are to help beginning teachers develop security and confidence that will improve their teaching, to encourage them to remain in the profession, and to eliminate the isolation they might experience. . . . On a broader scale, the experience may be viewed as an effort to improve the teaching profession by retaining the most effective teachers and ultimately, to improve the quality of education in the nation's schools (p. 33).

Staff development is one of the most important issues facing educators today. It will prove to be a crucial component in the school reform movement in the future. Staff development calls for broad support from many different groups as schools identify needs and then plan and develop activities to ensure that teachers and administrators have a process in place for growth opportunities throughout their professional careers. Creating effective induction programs to support beginning teachers as they enter the profession is an excellent place to begin.

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Emerging Teachers: The Nurturing Process

Margaret Foley

Since the publication of the Conant Report in 1963 which contained several recommendations for the support of beginning teachers, the induction phase of teacher education has received a great deal of attention. Over two decades later it is generally agreed that the early years of teaching represent an important period in the professional growth and development of beginning teachers. In fact, these first few years have been defined as the most critical period in a teacher's career. The experiences of the early years of teaching appear to have a strong influence on the level of effectiveness achieved and sustained over a teaching career and on the attitudes which govern a teacher's career. The early years also appear important in determining whether or not a teacher will remain in the teaching profession (Grant and Zeichner, 1981). Because of the importance of the first few years of teaching, professional education associations, state departments of education and teacher education institutions have advocated the need for carefully planned induction programs for beginning teachers.

There is much diversity among induction programs. Yet, they are typically designed to meet similar basic goals. Present induction programs, either implicitly or explicitly, are designed to encompass the following general goals: to improve teaching performance, to increase the retention of promising beginning teachers during the induction years, to promote the personal and professional well-being of beginning teachers, and to satisfy mandated requirements related to induction and certification (Huling-Austin, 1986). Beyond the similarity of these basic goals, induction programs vary greatly in content and structure.

Fox and Singletary (1986) note that frequently induction program models are assessment oriented. The program focus is on the assessment of the observable instructional skills of a beginning teacher. They suggest that few induction programs focus on providing the beginning teacher with support and assistance necessary in easing the transition from student to teacher. Furthermore, few programs focus on the goals of developing a reflective orientation to teaching and the skills essential to self-evaluation. Fox and Singletary propose four goals for induction programs that are concerned with providing assistance and support to new teachers with an emphasis on the outcomes of reflection and self-assessment:

1. develop a psychological support system for new teachers that focuses on self-perception and attitudes likely to result in increasing professional commitment and retention;
2. assist new teachers in developing acceptable methods for problem solving especially as related to classroom management and discipline;
3. assist new teachers in developing the skills necessary for transfer of pedagogic theories into appropriate teaching practices;
4. provide experiences in which new teachers can begin to develop professional attitudes and the analytical and evaluative skills necessary to maintain a high level of proficiency in a continually changing profession.

The assistance and support model proposed by Fox and Singletary encourages self-evaluation through reflection. Such an induction program is designed to assist new teachers in developing the skills necessary to prevent, reduce, or manage many of the problems they are likely to encounter.

If the objective of induction programs should be to offer assistance and support to new teachers, then an obvious concern is how to identify the nature of the assistance that would be most beneficial. Although much has been written on this subject, little is actually known of programs that effectively assist new teachers during the crucial induction phase.

In an article summarizing the research in the area of teacher induction programs, Huling-Austin (1987-1988) cites the findings of research on beginning teachers conducted at the Research and Development Center for Teacher Education at the University of Texas at Austin. Four factors were considered important in planning induction programs: teaching assignment, assignment of an appropriate on-site support teacher, program flexibility, and arousal of positive concerns not yet fully developed. The remainder of this paper will be devoted to a discussion of each of these factors.

Teaching Assignment

Teaching assignment is a highly influential variable in determining first year teaching success. It is important for beginning teachers to be assigned to classrooms within their discipline and that careful consideration be given to the teaching situation itself. Contextual factors such as undesirable assignments may make it difficult, if not impossible, for novice teachers to apply formal knowledge to their teaching practices. They may also contribute to teachers choosing to leave the profession (Bowers and Eberhart 1988). The beginning teacher should not be burdened with too many preparations or classrooms of low achieving students with motivation problems. It would be folly to expect a novice teacher to be successful in a teaching situation that would present a challenge to the experienced teacher. No induction program is likely to be effective enough to overcome major problems related to school context. The Teacher Induction Study, a study of two state mandated induction programs, showed that induction programs were not powerful enough to overcome misplacements (out of discipline assignments) and overloads (too many preparations) (Hoffman et.al., 1985). Other negative contextual factors that induction programs should not be expected to overcome include overcrowded classrooms, or a school climate that is not conducive to instruction, e.g., poor attendance, too many interruptions.

Grant and Zeichner (1981) suggest that school districts can take positive steps to assist beginning teachers during their entry year. Suggestions related to job-embedded support include reduction in class size, exemptions from non-teaching responsibilities, and release time for inservice training.

Support Teachers

Providing the beginning teacher with an appropriate on-site support teacher is seen by Huling-Austin (1987-1988) as likely to be the most powerful and cost effective intervention in an induction program. Research suggests that a support teacher is the single most helpful aspect of an induction program because it provides someone for the beginning teacher to turn to on a daily basis as needs arise. Most of the beginning teachers participating in the Model Teacher Induction Project Study (Huling-Austin, 1987-1988) felt that their support teachers were more helpful than any number of the workshops, classes or seminars in which they participated. Hegler and Dudley (1987) report that regularly planned contacts with a support teacher who is familiar with the district allows the beginning teacher to reflect on his/her own performance and attitudes and aids the beginning teacher's integration into the school community.

A number of factors are cited in the literature as contributing to the success of a beginning teacher/support teacher relationship. Huling-Austin (1987-1988) suggests the following factors:

1. The support teacher should be a highly competent, experienced teacher who is willing to devote the time and energy needed to provide the necessary support.
2. The support teacher and the beginning teacher should be teaching in the same discipline with one or more common preparations.
3. The support teacher and the beginning teacher should have a common planning period.
4. The support teacher and the beginning teacher should be paired for compatibility in professional ideologies and personalities.

Drawing from his own experiences in a mentor/protege experience, Parkay (1988) discusses four factors that characterized his successful relationship with his mentor. He suggests that these four factors are essential conditions for the formation of an effective mentor/protege relationship:

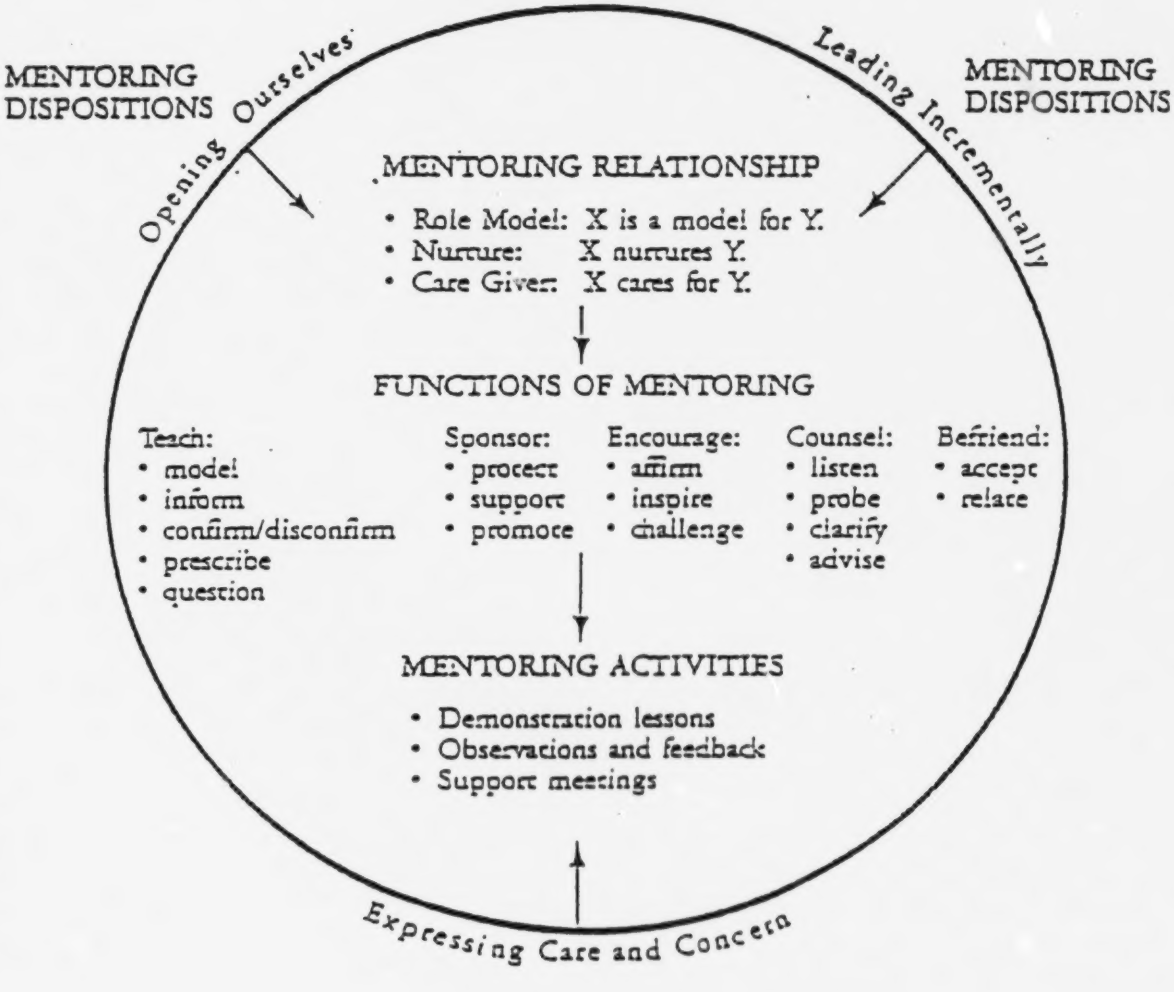
1. The mentor teacher should be viewed as a seminal contributor to the teaching profession.
2. The mentor/protege should share a similar style of thinking.
3. The mentor teacher should model a commitment to a professional way of life.
4. The mentor teacher should allow the protege to determine the direction and mode of his/her learning.

To understand the factors that contribute to an effective support teacher/beginning teacher relationship, it may be helpful to pursue a definition of the role of the mentor. Anderson and Shannon (1988) sought to conceptualize the role by drawing from the account of Mentor in The Odyssey. They suggest that mentoring is an intentional, nurturing, insightful, supportive and protective process in which modeling is a central quality.

In Figure 1, Anderson and Shannon summarize what they believe to be the essence of mentoring and its basic components. Seen as basic to mentoring is a relationship in which the novice teacher sees the mentor as a role model and the mentor nurtures the novice teacher. They identify three dispositions that mentors should have as they carry out their mentoring functions. First, mentors should have the disposition of opening themselves to their protege. Encouraging the protege to observe as well as question the mentor's teaching skills is one example of this disposition. Second, mentors should have the disposition to lead their protege to change incrementally over time. Third, mentors should have the disposition to express care and concern for the protege's professional and personal well-being. The mentoring relationship as represented in Figure 1 identifies five functions and related behaviors that are carried out within various mentoring activities.

Because of the significance of the role of the mentor teacher, careful consideration must be give to their selection and preparation. Zimpher and Rieger (1988) suggest that school districts establish mentor selection criteria that:

Figure 1
Mentoring Model


MENTORING DISPOSITIONS
Opening Ourselves
Leading Incrementally
MENTORING DISPOSITIONS
MENTORING RELATIONSHIP
• Role Model: X is a model for Y.
• Nurture: X nurtures Y.
• Care Giver: X cares for Y.
FUNCTIONS OF MENTORING
Teach:
• model
• inform
• confirm/disconfirm
• prescribe
• question
Sponsor:
• protect
• support
• promote
Encourage:
• affirm
• inspire
• challenge
Counsel:
• listen
• probe
• clarify
• advise
Befriend:
• accept
• relate
MENTORING ACTIVITIES
• Demonstration lessons
• Observations and feedback
• Support meetings
Expressing Care and Concern

(Anderson and Shannon, 1988)

1. develop a local definition of teacher expertise including competence in the classroom and number of years experience.
2. indicate commitment to the role through a past history of professional involvement and willingness to serve.
3. reveal personal power, self-confidence and ability to model integrity and empathy.
4. demonstrate expertise in the role.

The length of time of support teacher/beginning teacher relationships is another aspect for consideration. Ward (1986) suggests that support teachers be assigned to beginning teachers for a minimum of one school year. Huling-Austin (1987-1988) recommends flexibility in determining the length of this assignment. She notes that some beginning teachers will need more support for a longer period of time than others. She also cautions that no matter how carefully support teachers and beginning teachers are paired there will be times when the arrangement will not work as planned. She recommends structuring the initial arrangement for one semester to be reviewed at the end of this time with one of three options to be exercised: to continue the arrangement for a second semester; to terminate the arrangement; to assign the beginning teacher to a different support teacher. The third option would be useful if the initial arrangement did not work well or if the district wanted to expose the new teacher to a different perspective offered by an additional experienced teacher.

Program Flexibility

Induction programs should be structure flexibly enough to accommodate the emerging needs of the participants (Huling-Austin, 1987-1988). While the general needs of the beginning teacher are fairly predictable, it is difficult to determine in advance when or how these needs will be experienced by each individual. It is therefore important to closely monitor the emerging needs and concerns of the beginning teacher and to provide support and intervention as needed. To meet the challenge of diversity, induction programs should include opportunities for participants to express their needs and concerns and to suggest inservice topics. Built into an induction program then should be periodic assessments, the results of which would be used to plan future programming.

Grant and Zeichner (1981) found the concerns of beginning teachers to be extremely diverse. Their data supports the contention that induction programs should focus on personalizing and individualizing support and that the support be geared toward the specific needs of beginning teachers. They also suggest that beginning teachers be involved in planning induction experiences. They caution, however, that those in charge of planning induction experiences examine the expressed needs to determine whether or not they reflect a clear and carefully thought out conception of effective teaching practices.

The general needs of beginning teachers should also be considered by program planners. Research in this area suggests that the following might be considered for seminar topics: classroom management and discipline, district curriculum, record keeping, parent conferencing, procedures for referral and assessment of pupils with suspected learning problems, grading guidelines, relationships with colleagues and administrators (Fox and Singletary, 1986).

Induction program seminars should also include regular opportunities for new teachers to meet in a non-threatening, supportive environment to freely express their ideas, needs and concerns with their peers. Planning frequent, regular meetings with other beginning teachers who are involved in similar experiences will provide opportunities for new teachers to exchange views and also help to alleviate feelings of separation and isolation.

Arousal of Positive Concerns

It is possible for an induction program not only to meet the expressed needs of beginning teachers but also to arouse positive concerns that have not yet fully developed (Huling-Austin, 1987-1988). Based on her research, Odell (1986) states that as the new teacher's experience in the school increases, the need for system information decreases. Odell suggests that needs begin to shift toward demands for more help with teaching strategies and the instructional process. At this point the new teacher's focus begins to move away from personal and management concerns toward becoming more thoughtful about the content and organization of teaching. This is an opportunity for induction program planners to begin to develop in new teachers a readiness for learning about effective teaching practices. It is an opportune time to stimulate thinking about their teaching practices and to arouse their interest in learning about effective teaching models.

Calls for reform of the teaching profession have focused upon almost every aspect of teaching and teacher preparation. Today more than ever before there is a need for cooperation among all those groups concerned with teaching and teacher education. School districts, university/college educators, teacher professional associations, state departments of education and local communities must work together to provide the information, experiences and support necessary to prepare teachers for a challenging and continually changing career. Flexibility and the means to individualize programs to meet the needs of the participants are critical elements in planning an effective program. Induction programs show great promise for easing the transition from being a student to becoming a professional teacher who is capable of meeting the challenges of education today and tomorrow.

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The Role of the Teacher in Follow-Up Activities For Staff Development Programs

Joseph Clapper

A superintendent from a neighboring school district was brought in on the first day of the school year to provide what is commonly known as "inservice" for teachers, an annual event for the district. During the course of his presentation, the superintendent was animated, explicit, and positive as he shared a variety of research-based information and strategies in regard to his topic--motivation in the classroom. At the close of the day the inservice program (the speaker) was evaluated by the teaching staff. The speaker drew rave reviews from the faculty. They reported that they enjoyed both the speaker's substance and his style. Nothing, however, was said the remainder of the school year regarding the actual content of the first day inservice program. Often this scenario sounds all too familiar. It has become the rule rather than the exception for schools to conduct similar inservice programs that are sometimes mistakenly called staff development.

Did this inservice program make an impact upon teachers' motivational strategies in their classrooms? The answer is, in all probability, a resounding "No!" The missing ingredient was follow-up in regard to the inservice presentation. All too often "one-shot deals" by outside speakers are school districts' means to further develop their teaching staff. The fault of these programs is not, generally speaking, the presenter. The culprit in such a program is the failure to involve teachers in the planning of such a program and lack of activities, education, and training following them.

Staff Development vs. Inservice Programming

There is a clear distinction in definition, makeup, and overall philosophy between staff development and inservice for teachers. For our purposes staff development refers to any systematic, ongoing attempt to improve the overall performance of school personnel. In most cases, the proposed improvements are directed toward teachers; however, attempts should also be made toward improving school administrators' performances. This definition is in clear contrast to not only the inservice program described earlier, but nearly all inservice programs.

A key to any staff development program is that it is an ongoing process. The personal and professional development of teachers should be viewed as a perpetual process that involves all staff in a collaborative fashion for the purpose of bringing about positive changes in school personnel and program. Inservice programs are generally short, hazily focused presentations developed by school administrators or others in direct authority over teachers. These programs often do not come about from cooperative planning nor do they have a specific goal in mind in regard to making positive changes in school personnel.

Reflecting upon the dramatic differences between inservice education for teachers and staff development programs might cause one to believe that staff development programs for teachers are the panacea for teachers' professional development. This is, however, clearly not the case. There are key ingredients that must exist in staff development programs. Should these ingredients not be present, most or all of the effort and finances put into such a program could prove to be fruitless.

Finally, it should be noted that genuine staff development programs involve teachers in their personal and professional development. Clearly, there is merit to development in both of these areas. However, in this paper, we are looking at development from the professional perspective.

Follow-Up: The Key to Staff Development

It is not uncommon for school districts to spend thousands of dollars to bring in special speakers for their staff development programs. These presentations, with the proper preparation and readiness activities, can be very useful "kickoff" programs for staff development.

Follow-up and evaluation of these "kickoff" staff development programs are imperative to making an impact upon improving instruction. Fullan (1982) is in complete agreement with this premise. He clearly states: "The absence of follow-up after inservice is without a doubt the greatest single problem in contemporary professional development" (p. 7).

Thompson and Cooley (1986) performed a national study of outstanding staff development programs. Follow-up to the staff development program was found to be a major part of these meritorious programs. The authors state that "the monitoring of teacher progress following staff development activities insures that activities are beneficial in terms of improving teacher skills" (p. 97).

It seems obvious that a key to effective staff development programs is planning. Certainly, we are all hopeful that an effective presentation will be made to the professional faculty. Much emphasis should be placed on preparing for the initial staff development program. A needs assessment to determine the direction of the program is critical. Teachers must be both ready and open to the planned initial program. Equally important, however, is the planning for follow-up to this program. The activities for following through should not be an afterthought. The involvement of teachers in follow-up planning is important to its success.

Teacher Involvement

The complexity and pronounced change in school cultures today coupled with the vast information explosion have made staff development programs to improve individual teacher skills essential. A key ingredient in the efficacy of these programs is the involvement of teachers in the planning, implementation, and follow-up of such programs.

The widespread dissatisfaction and ineffectiveness of traditional inservice staff development programming for teachers has been well documented. The involvement of teachers in the planning, implementation, and subsequent follow-up of their own development appears to be critical to alleviating some of this dissatisfaction.

Decision making in staff development needs to be shared. A sense of ownership and commitment is gained when people participate in decisions that will affect them. This concept of sharing decision making can be thought of as a form of teacher empowerment. Lack of participation or "empowerment" creates frustration, lack of commitment, reduced initiative, and lowered morale, if not outright resistance.

Studies by Johnson (1980) indicate the significance of teacher participation in the planning of staff development programs. In these studies the programs were deemed a "building responsibility and activity" even though these programs are often subject to approval and review at the district level. Johnson concludes that further planning should be in the hands of those who will be affected and teachers should definitely have a major voice in this regard.

Stevenson (1987) also emphasizes the importance of planning and organization for staff development programs as a collaborative effort. His study of effective secondary school staff development programs also stresses that a crucial aspect of these programs is ongoing support for teachers relative to the staff development program. According to Stevenson, "the most important impact of collaboratively planned staff development is enhancing collegial interactions among teachers and administrators in their daily work; a key characteristic of effective schools" (p. 246).

The collaboration of school personnel is not only important in terms of planning staff development programs, but is also useful in regard to the performance of actual staff development activities. Wade (1985) provides a meta-analysis of inservice practices associated with "above-average learning effectiveness"--those activities which have proved to be most successful in terms of making positive impacts upon a teacher's instruction. The single highest-rated practice was found to be independent study by teachers. The next highest-rated practice was found to be self-instruction. These analyses seem to indicate that it would be prudent for supervisors to work cooperatively with teachers in encouraging them to become involved in independent study and self-instruction as viable alternatives to the more traditional inservice/teacher development workshop format.

Teachers are the most valuable staff development resource available to any school district. Clearly, there is a wealth of experience available to school districts among their own faculty. All too often these valuable resources are overlooked in the planning, implementation, and follow-up of staff development programs. Big name consultants are quite costly and generally give a "quick hitter" type of inservice with limited lasting impact. The use of in-house talent is an inexpensive and effective way of meeting staff development needs with the special benefits of acknowledging the skills of a teaching staff.

Follow-Up Activities

Wade (1985) suggests that there is no "magical combination" for successful inservice. She does suggest, however, that the use of observation, microteaching, audio and visual feedback, and practice--either individual or in some combination--are more effective than programs that do not use these methods. The findings of this meta-analysis of 91 well-documented studies of inservice education should be used to springboard us into previously selected and well-planned follow-up activities of staff development programs.

Teachers need to be given the opportunity to practice a particular strategy and/or methodology that may have been previously presented to them and then evaluate their performance personally. The use of the video camera and/or an audio tape in the classroom would be of great value in reflecting upon this "practice teaching" effort. This use of video and/or audio taping of a teacher's lesson is primarily for the purpose of teacher self-assessment. Providing teachers with the opportunity to assess their own instruction and to decide for themselves which areas they would like to improve clearly puts the teachers in control of the content and outcomes of their own personal staff development programs. Wade's findings are supportive of this client-based approach toward the improvement of instruction.

Hoover and Carroll (1987) investigated further the use of selfassessment of classroom instruction as an effective approach to staff development. They developed a self-assessment checklist for the purpose of helping teachers to analyze their own instruction. The authors indicate that further study will continue in self-assessment because it has the "potential to be a powerful instrument in promoting a teacher's professional development over the course of his or her career" (p. 188).

Some follow-up activities for staff development programs involve the use of clinical supervision. Cogan (1973) defines clinical supervision as "the rationale and practice designed to improve the teacher's classroom performance" (p. 9). Cogan adds that clinical supervision "takes its principal data from the events of the classroom" and "the analysis of these data and the relationship between teacher and supervisor form the basis of the program, procedures, and strategies designed to improve the students' learning by improving the teacher's classroom behavior" (p. 9).

A technique for the use of self-evaluation of instruction that incorporates some aspects of Cogan's definition of clinical supervision is to simply have a peer systematically collect data pertaining to a particular instructional strategy. These data would then be evaluated by the teacher and peer in a reflective manner to determine possible strengths and/or weaknesses. Generally speaking, this technique is referred to as peer supervision. Glatthorn (1987) defines peer supervision as "a process by which small teams of teachers use the essential components of clinical supervision to help each other grow professionally" (p. 33).

Goldsberry (1986) suggests a "colleague consultation" approach to teacher development activities. He lists nine key characteristics of this model--all of which have implications for clinical supervisory techniques. It seems clear, then, that a prerequisite to peer supervision or "colleague consultation" is the training of teachers in clinical supervision methods.

A study by Sparks (1984) found that peer observations contribute to the success of staff development training. She noted that "in groups of six or seven, teachers had ample opportunity to discuss what they had tried, how it had worked, and special concerns or problems" (p. 224). She further states that "this research suggests that the provision of objective, nonthreatening peer observation activities boosts the effectiveness of normal workshop based inservice training" (p. 224). These findings corroborate the Wade (1985) meta-analysis that peer observations--not trainer-provided coaching--is a much more powerful training activity. Of course, the provision of teacher released time is imperative if this strategy is to be carried out successfully.

A novel idea pertaining to teacher input is the concept of a "Teacher-Leader" classification (Marks, 1983). The Teacher-Leader is an experienced teacher with generally good communication skills who is looked on favorably by a majority of the teaching staff. The Teacher-Leader acts as a "go-between" collecting information from the teaching staff regarding their own needs and goals pertaining to their own development. With the widespread teacher dissatisfaction regarding inservice and staff development programming prevalent today, perhaps the Teacher-Leader concept is a valid one.

A final suggestion for follow-up to staff development programs is the provision of released time for faculty. This low cost follow-up activity would permit teachers to view a possible staff development implementation at an advanced stage. Additionally, the provision of this time would send a clear signal to teachers that the staff development program is a high priority pertaining in the overall functioning of the school district.

Summary

Teacher development is on-the-job training and education that deepens a teacher's capacity to teach better so that students may learn the knowledge and skills expected of them. It is truly an ongoing process--from preservice throughout the entire professional career. Meaningful, effective staff development programs, therefore, are critical to a teacher's personal and professional development.

Staff development is truly not the same as inservice education for teachers. Genuine staff development programs are long range and involve all school personnel in their planning, formulation, implementation, and follow-up. This collaboration brings a sense of ownership and individualization to the program.

The involvement of teachers in follow-up activities is crucial to the efficacy of any staff development program. Teachers must be afforded opportunities to assess and reflect upon their own teaching--especially as it relates to their own individualized developmental needs and goals.

Left solely to their own devices, most teachers cannot fully diagnose all of their own professional needs. This is not to say, however, that teachers should be ignored relative to having input into their own development. Research cited earlier indicates the significance of professional collaboration. Teachers need to have input into the planning, implementation, and perhaps most importantly, follow-up of their own development program. Unless this is achieved, staff development programs can be only minimally successful.

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